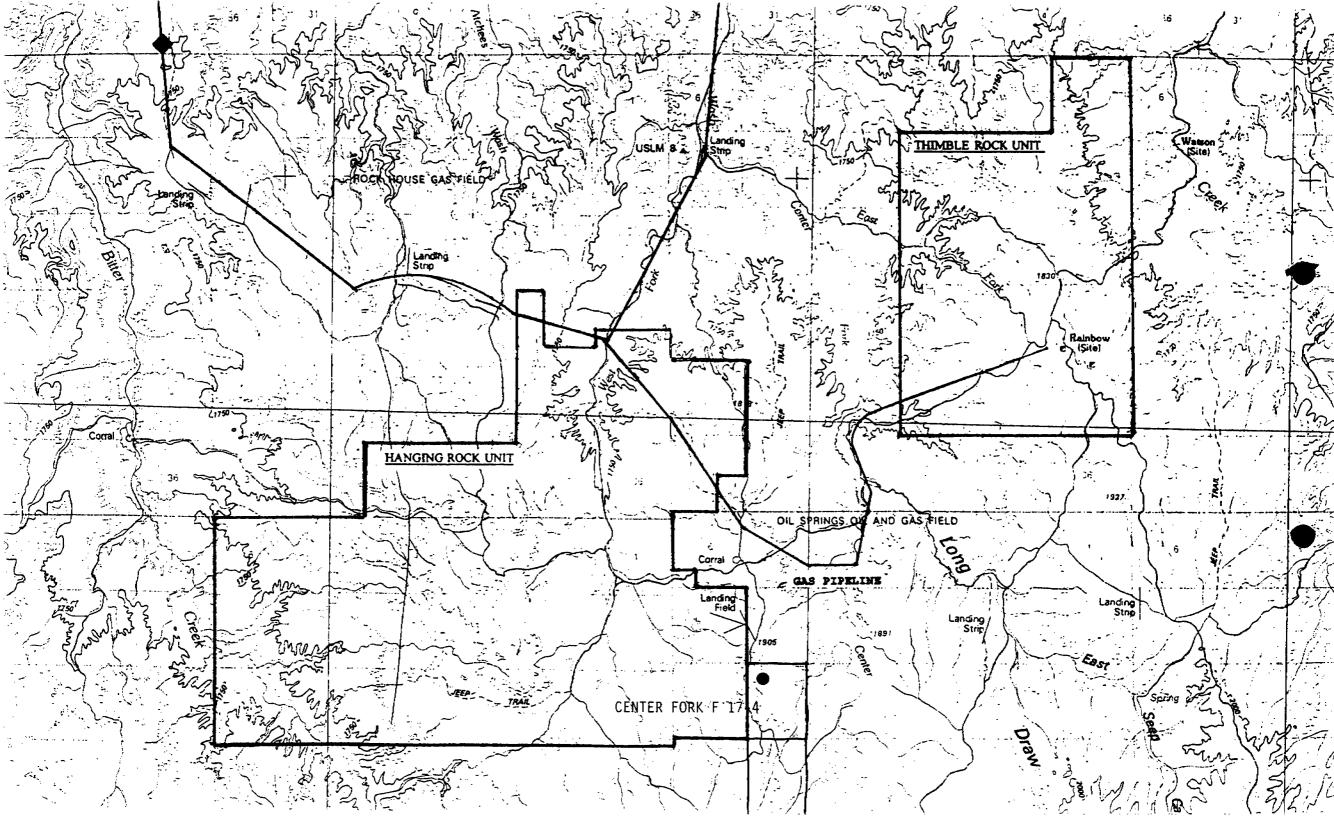
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Application to Drill Form 9-33	(1—C)	UTU-66426	CFCIL, CARRINING
1. Oil Weil Gas Weil X	Other .	6. If Indian, Allotted	or Tribe Name
		7. Unit Agreement N	lame
2. Name of Operator		1 .	
Freedom Energy, Inc.		8. Farm or Lease Na	me
3. Address of Operator or Agent	·	center Fork f	
1856 Balsam Ave. Greeley	, Co. 80631	9. Well No.	
4. Surface Location of Well		17-4	
(Governmental 1/4 or 1/4 1/4	<b>()</b>	10. Field or Wildcat N	ame
NW/4 660' FWL, 660	'FNL Approx.	1	my & Ruchmand of my
Attach: Topographical or oth	ter acceptable map	11. Sec., T., R., M., or	
snowing location, ac	cess road, and lease boundaries.	Blk and Survey or	Area "\"
14. Formation Objective(s)	15. Estimated Well Depth	Sec.17-T12S-R24E	•
Wasatch/Mesa Verde	4900'	12. County or Parish	13. State
10 7 9 0		Uintah	Utah
16. To Be Completed by Operat	or Prior to Onsite		
a. Location must staked	•		•
b. Access Road Flagged	,		•
c. Sketch and/or map of loca (To be provided at onsite)	ntion, showing road, pad dimension	s, reserve pit, cuts, and fi	ills
17. To Be Considered By Operat	ors Prior to Onsite		
a. H <sub>2</sub> S Potential			
b. Private Surface Ownership			
c. Cultural Resources (Archa	eology)		
d. Federal Right of Way			
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18. Additional Information			
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Nars



Form 3160-3 (November 1983)

CONDITIONS OF APPROVAL, IF ANY

# HAITED STATES

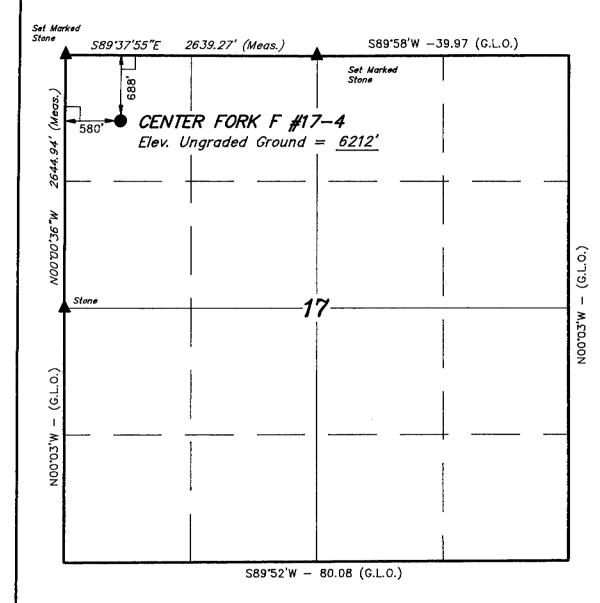
TRIPLICATE\* (Other instructions on

Form approved. Budget Bureau No. 1004-0136

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OIL WELL	WELLX OTHER	4	BINGLE	MULTIP	LN KX	S. FARM OR LEASE NAI	<b>K</b> 3
2. NAME OF OPERATOR	<u> </u>	·	2013	2015	X	Center Fork F	
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At surface	(Report location clearly s	ind in accordance Wi	th any State requirem	ients." }		11	
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OR APPLIED FOR, ON	DRILLING, COMPLETED,		4900'		1	ROTARY	
21. ELEVATIONS (Show 1	whether DF, RT, GR, etc.)				<u> </u>	22. APPROX. DATS WOL	RE WILL STARTS
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23.		PROPOSED CAS	ING AND CEMENTING	PROGRAM	4		
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER P	OOT SETTING	DEPTH	1	QUANTITY OF CEMEN	T
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## \*See Instructions On Reverse Side

# T12S, R24E, S.L.B.&M.



## LEGEND:

= 90' SYMBOL

= PROPOSED WELL HEAD.

= SECTION CORNERS LOCATED.

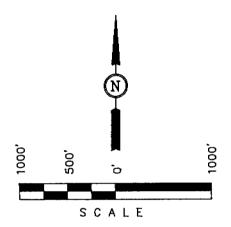
NOTE: BASIS OF BEARINGS IS THE NORTH LINE OF SECTION 7, T12S, R24E, S.L.B.&M. WHICH IS ASSUMED FROM G.L.O. INFORMATION TO BEAR N89'59'E.

## FREEDOM ENERGY, INC.

Well location. CENTER FORK F #17-4, located as shown in the NW 1/4 NW 1/4 of Section 17, T12S, R24E, S.L.B.&M. Uintah County Utah.

#### BASIS OF ELEVATION

SPOT ELEVATION LOCATED IN THE SW 1/4 OF SECTION 8, T12S, R24E, S.L.B.&M. TAKEN FROM THE ARCHY BENCH SE. QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 6250 FEET.



#### CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME. OR UNDER MY. SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIE

> REGISTERED. LAND SURVEYO REGISTRATION NO. 161319. STATE OF DIAH ...

> > FREEDOM ENERGY, INC.

# UINTAH ENGINEERING & LAND SURVEYING 85 SOUTH 200 EAST - VERNAL, UTAH 84078 (801) 789-1017

DATE SURVEYED: SCALE DATE DRAWN: 3-30-96 4-1-96 PARTY REFERENCES J.K. B.C. D.R.B. G.L.O. PLAT WEATHER WARM

#### ADDENDUM TO APD

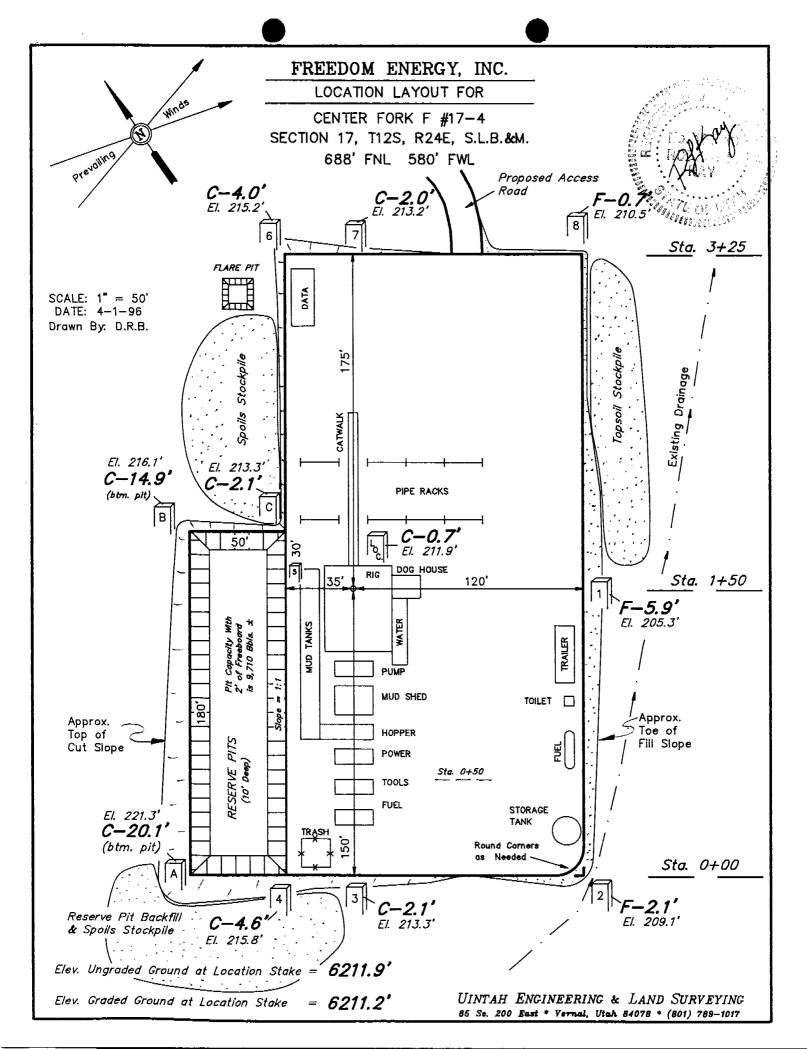
Center Fork F #17-4 NW 1/4, NW 1/4, Sec. 17, T12S, R24E Lease UTU-75206 Uintah County, Utah

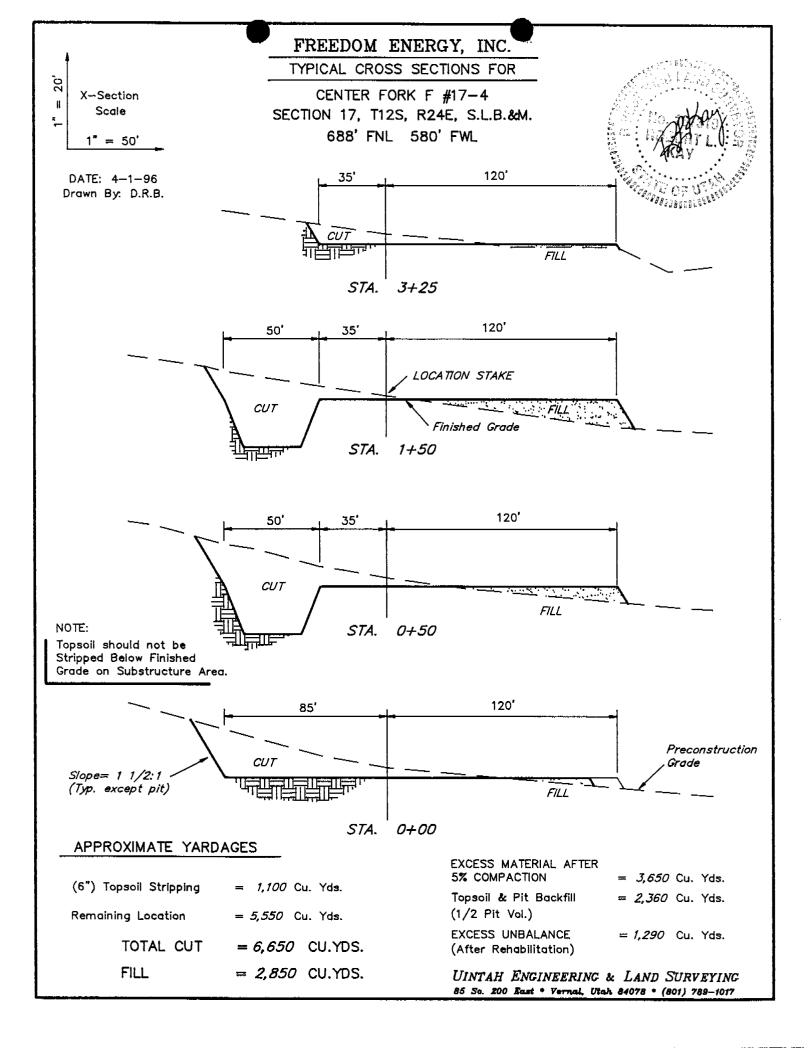
#### HAZARDOUS MATERIALS DECLARATION

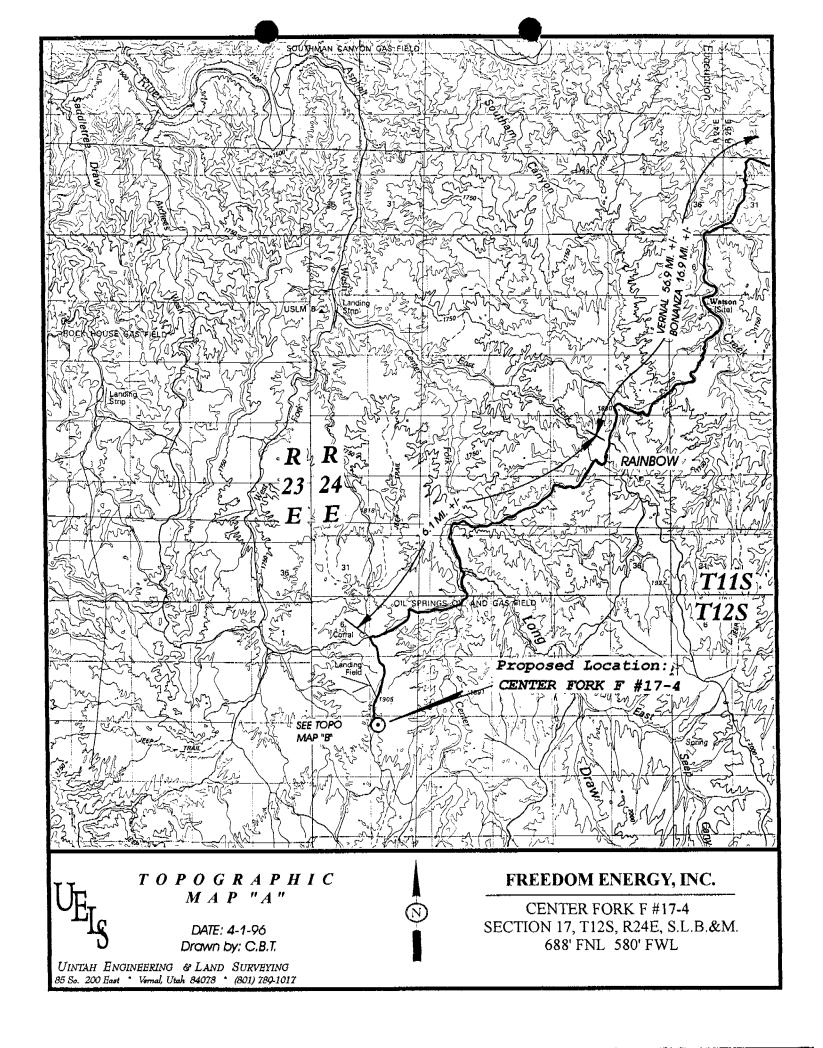
No chemical subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, stored, produced, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities will be used, produced, stored or transported, or disposed of in association with the drilling of this well.

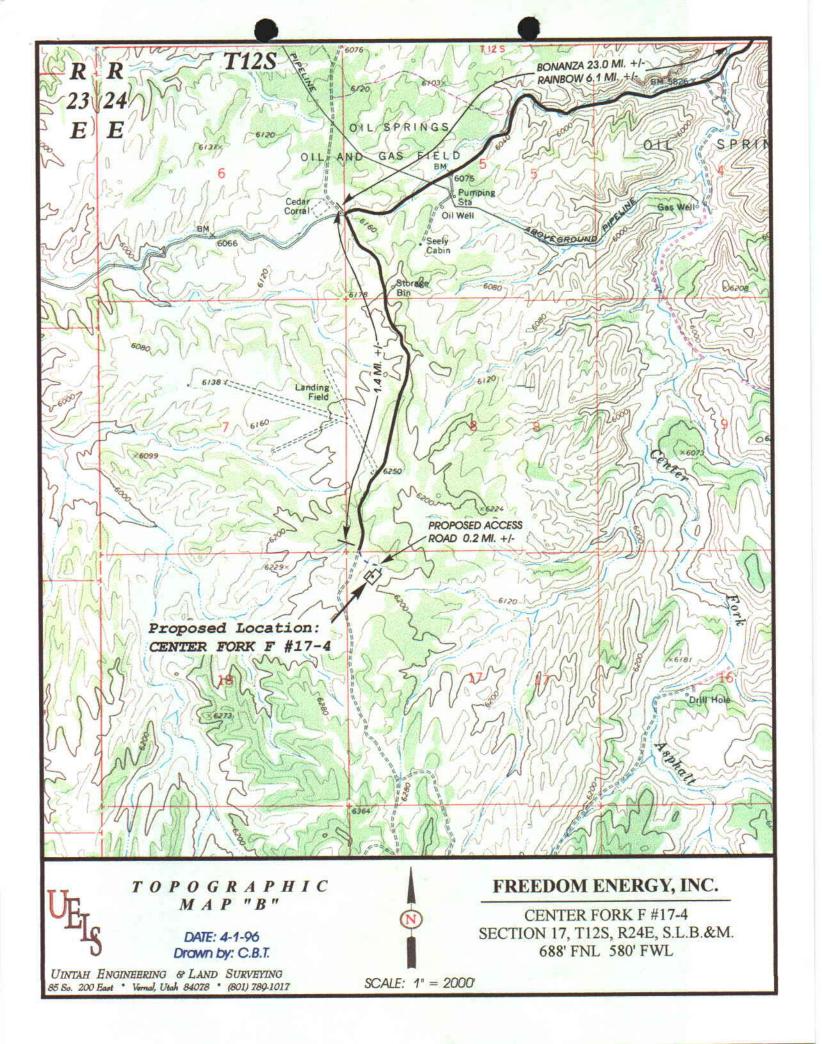
#### LOCATION AND TYPE OF WATER SUPPLY

Water for drilling and cementing the subject well will be hauled by truck from Evacuation Creek under Dalbo's Temporary Application Number T69928.









# Ten Point Plan

Freedom Energy, Inc. Hanging Rock Unit Hanging Rock Federal F 7-4

Surface Location SE 1/4, NW 1/4, Section 12, T. 7 S., R. 24 E.

#### 1. Surface Formation:

Green River

# 2. Estimated Formation Tops and Datum:

<u>Formation</u>	<u>Depth</u>	<b>Datum</b>
Green River	Surface	6,120' G.L.
Oil Shale	900	5,220
Wasatch	2,800	3,320
Mesaverde formation	4,700	1,420
T.D.	5100	1,020

# 3. Producing Formation Depth:

Formation objective include the Wasatch and its submembers.

# 4. Proposed Casing:

Hole	Casing	g	Grade	Setting	Casing
<u>Size</u>	Size	Weight/Ft.	& Tread	Depth	New/Used
12 1/2	9 5/8	36	J-55/STC	300	New
7 7/8	4 1/2	11.6	J-55/STC	T.D.	Used/inspected

# Cement Program:

Casin	ng Cement Type	Cement	Cement	Cement
<u>Size</u>		Amount	<u>Yield</u>	Wieght
9 5/8	Class "G" 2% Calcium 1/4 #/sk cello flake	200 sks.	1.18 cu. ft./sk.	15.6 lbs./gal.

Casing Size	Cement Type	Cement Amount	Cement <u>Yield</u>	Cement Wieght
4 1/2	Lead Class "G" 3 % salt 16% gell 10# sk/Gilsonite	200 sks	3.90 cu. ft./sk.	. 11.0 lbs./gal.
	Tail Class "G" 10% salt 10% gypsum 2% WR15 .4 lbs/sk FL 25	500 sks +/-	1.53 cu. ft./sk	. 14.8 lbs./gal.

#### 5. BOP and Pressure Containment Data:

The anticipated bottom hole pressure will be less than 3000 psi.

A 3000 psi WP BOP system as described in the BOP and Pressure Containment Data (attached) will be installed and maintained from the 9 5/8" surface casing. The BOP system including the casing will be pressure tested to the minimum standards set forth in "On Shore Order #2". The BOP will be mechanically checked daily during the drilling operation.

#### 6. Mud Program:

Interval	Mud weight lbs/gal.	Viscosity Sec./Qt.	Fluid Loss M1/30 Mins.	Mud Type
0-300 300-2000 2000-T.D.	Air/Clear Water Clear Water 8.4-8.6	 30	No Control No Control No Control	Water/Gel Water/Gel 5% KCL

# 7. Auxiliary Equipment:

Upper Kelly cock, full opening stabbing valve, 2 1/2" choke manifold and pit level indicator.

#### 8. Testing, Coring, Sampling and Logging:

a)	Test:	None are anticipated.
b)	Coring:	There is the possibility of sidewall coring.
c)	Sampling:	Every 10' from 2000' to T.D.

d) Logging:

Type

Interval

DLL/SFL W/GR and SP FDC/CNL W/GR and CAL

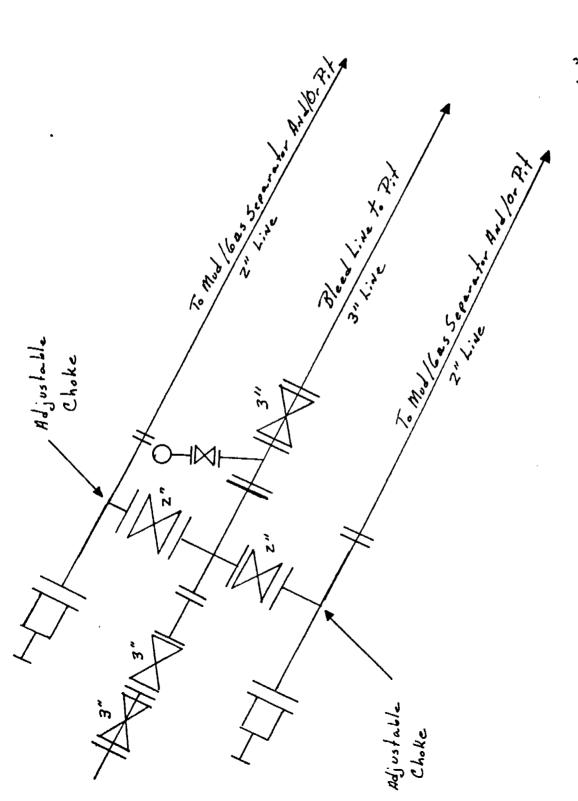
T.D. to Surf. Csg T.D. to Surf. Csg

# 9. Abnormalities (including sour gas):

No abnormal pressures, temperatures or other hazards are anticipated. Oil and gas shows are anticipated in the Wasatch Formation. Other wells drilled in the area have not encountered over pressured zones or  $H_2S$ .

# 10. Drilling Schedule:

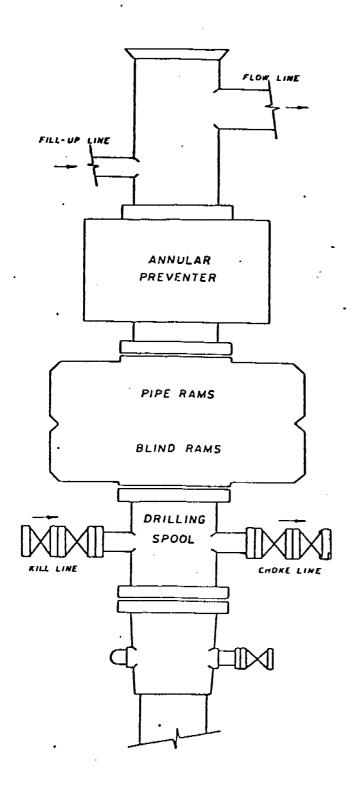
The anticipated starting date is May 15, 1996. Duration of operations expected to be 30 days.



3,000 Psi Choke Maxifold Eguipmont

Note: Contiguation May Vory

#### BOP AND PRESSURE CONTAINMENT DATA



- BOP equip shall consist of a double gate, hydraulically operated preventer with pipe & blind rams or two single ram type preventers, one equipped w/pipe rams, the other w/blind rams.
- BOP's are to be well braced w/ hand controls extended clear of substructure.
- Accumulator to provide closing pressure in excess of that required w/sufficient volume to operate all components.
- 4. Auxiliary equipment: Lower kelly cock, full opening stabbing valve, 2½" choke manifold, pit level indicator &/or flow sensors w/alarms.
- 5. All BOP equipment, auxiliary equipment stand pipe & valves & rotary hose to be tested to the rate pressure of the BOP's at time of instal ation & every 30 days thereafter. BOP's to be mechanically checked daily.
- Modification of hook-up or testing procedure must be approved in writing on tour reports by wellsite representative.

#### SELF-CERTIFICATION STATEMENT

The following self-certification statement is provided per Federal requirements dated June 15, 1988.

Please be advised that Freedom Energy, Inc., is considered to be the operator of the following well.

Center Fork F #17-4 NW 1/4, NW 1/4, Section 17, T. 12 S., R. 24 E. Lease U-75206 Uintah County, Utah

Freedom Energy, Inc., is responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

Bond coverage is provided by Certificate of Deposit, held in Womens Bank, 821 17th Street, Denver, Colorado 80202; Account Number UT-1001

William A. Ryan

Agent

**Rocky Mountain Consulting** 

350 S. 800 E.

Vernal UT 84078

801-789-0968

801-823-6152

# FREEDOM ENERGY, INC.

13 POINT SURFACE USE PLAN

**FOR WELL** 

**CENTER FORK F** 

# 17-4

**LOCATED IN** 

NW 1/4, NW 1/4

SECTION 17, T. 12 S., R. 24 E., U.S.B.&M.

**UINTAH COUNTY, UTAH** 

**LEASE NUMBER: UTU-75206** 

SURFACE OWNERSHIP: FEDERAL

#### 1. Existing Roads

To reach the Freedom Energy Inc., Center Fork F #17-4 well location, in Section 17, T. 12 S., R. 24 E., from Bonanza, Utah:

Starting in Bonanza, Utah proceed south on the paved road for 4 miles. Turn south (left) on the Book cliffs road (dirt road). Proceed south 3.9 miles to the Greeks Corrals. Turn west (right) at the fork in the road. Proceed 8.3 miles to the Asphalt Wash sign. Stay to the south (left) of the sign. Proceed .7 miles to the Rainbow sign. Stay to the west (right) of the sign. This is also called the Kings Wells road. Proceed 6.1 miles to the Cedar Corrals. Turn south (left) and proceed 1.4 miles, follow the flagging to the proposed location.

All roads to the proposed location are State or County maintained roads.

Please see the attached map for additional details.

#### 2. Planned access road

Approximately 1000 feet of new road construction will be required.

The proposed road has been staked.

The road will be built to the following standards:

A)	Approximate length	1000 ft
B)	Right of Way width	30 ft.
C)	Running surface	18 ft.
D)	Surfacing material	Native soil
E)	Maximum grade	8%
F)	Fence crossing	None
G)	Culvert	None
H)	Turnouts	None
I)	Major cuts and fills	None
J)	Road flagged	Yes
K)	Access road surface ownership	Federal

Newly constructed roads will be built using native soils from borrow pits on either or both sides of the road. The road will be crowned and ditched. Ditches will be constructed along either side where it is determined necessary to handle run off and minimize the possibility of erosion.

Please see the attached location plat for additional details.

A right of way will be required. Access from the Uintah County road to the lease boundry will require a right of way. The lease boundary is on the north side of Section 17, T. 12 S., R 24 E. The majority of the right of way will also be used to access a well currently being permited by Freedom Energy Inc. The well is the Hanging Rock Fed. F #7-6 in Section 7, T. 12 S., R 24 E.

Access from the county road will be via an existing 2 track road. The operator proposes to follow the 2 track for 1.4 miles. The 2 track will require minimal upgrading.

All travel will be confined to existing access road right of ways.

Access road and surface disturbing activities will conform to standards outlined in the USGS publication (1978) surface operating standards for oil and gas development.

#### 3. Location of existing wells

The following wells are located within one mile radius of the location site.

A) Producing wells	None
B) Water wells	None
C) Abandoned wells	None
D) Temporarily abandoned wells	None
E) Disposal wells	None
F) Drilling wells	None
G) Shut in wells	None.
H) Injection wells	None
I) Monitoring or observation wells	None

Please see the attached map for additional details.

# 4. Location of tank batteries, production facilities, and production gathering service lines.

All production facilities will be contained within the proposed location site. Please see the attached plat plan for a typical gas well separator installation and well site piping.

All permanent (on site for more than six months or longer) structures constructed or installed will be painted a desert brown color. Facilities required to comply with O.S.H.A. (Occuoational Safery and Health Act) will be excluded. The required paint color is Desert Brown (10 YR 6/4).

All tanks will be surrounded by a dike of sufficient capacity to contain the storage capacity of the largest tank in the battery. The integrity of the dike will be maintained.

The operator will adhere to all site security guidelines and regulations identified in 43 cfr 3126.7.

All off lease storage, off lease measurement, comingling on lease or off lease, of production, will have prior written approval from the authorized officer.

A proposed surface gas line has been staked on the ground (blue flagging). The proposed pipe line is approximately 1.4 miles long. The line will require an off lease right of way. The surface line will be strung on the upgraded 2 track, welded in place and boomed off the side of the road. The line will end at Freedom Energy Inc. 4" gathering line in Sec. 6, T. 12 S., R. 24 E. There will be no additional surface disturbances required for the installation of a gathering line. The line will be a 4" steel line.

The gas meter run will be located within 500' of the well head. The gas line will be buried or anchored down from the well head to the meter. Meter runs will be housed and/or fenced.

The gas meter will be calibrated and the tank strapped in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. The authorized officer will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration report will be submitted to the BLM's Vernal District office. All measurement facilities will conform with API and AGA standards for gas and liquid hydrocarbon measurement.

#### 5. Location and type of water supply

Water for drilling and cementing the subject well will be hauled by truck from Evacuation Creek. Water for completion will come from the same supply or Vernal City.

#### 6. Source of construction materials

All construction material for this location site and access road shall be borrow material accumulated during constuction of the location site and access road. Additional road gravels or pit lining material will be obtained from private sources.

#### 7. Methods for handling waste disposal

#### A) Pit construction and liners:

The reserve pit will be approximately 10 ft. deep and most of the depth shall be below the surface of the existing ground. Please see the attached plat for details.

#### The reserve pit will not be lined.

The reserve pit will not be used to store water for drilling. A semi-closed system will be used to drill the well. All fresh water for drilling will come from a frac tank placed on location and from the rig tank. The pit will be used to hold non-flammable materials such as cuttings, salt, drilling fluids, chemicals, produced fluids, etc.

#### B) Produced fluids:

Produced water will be confined to the reserve pit, or if deemed necessary, a storage tank for a period not to exceed 90 days after initial production. During the 90 day period an application for approval for a permanent disposal method and location will be submitted to the authorized officer.

#### C) Garbage:

A trash cage fabricated from expanded metal will be used to hold trash on location and will be removed to an authorized land fill location.

#### D) Sewage:

A portable chemical toilet will be supplied for human waste.

#### E) Site clean-up

After the rig is moved off the location the well site area will be cleaned and all refuse removed.

#### 8. Ancillary facilities

There are no ancillary facilities planned at this time and none are foreseen for the future.

#### 9. Well-site layout

Location dimensions are as follow:

Pad length	325 ft.
Pad width	155 ft.
Pit depth	10 ft.
Pit length	180 ft.
Pit width	50 ft.
Max cut	20.1 ft.
Max fill	2.1 ft.
Total cut yds	6,650 cu. yds.
Pit location	west side
Top soil location	east side
Access road location	north side
Flare pit	north west corner
	Pad width Pit depth Pit length Pit width Max cut Max fill Total cut yds Pit location Top soil location Access road location

Please see the attached location diagram for additional details.

All pits will be fenced according to the following minimum standards:

- A) Thirty nine inch net wire shall be used with at least one strand of wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- B) The net wire shall be no more than 2 inches above the ground. The barbed wire shall be 3 inches above the net wire. Total height of the fence shall be at least 42 inches.
- C) Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

- D) Standard steel, wood or pipe posts shall be used between the corner braces. Maximum distance between any two posts shall be no greater than 16 ft.
- E) All wire shall be stretched by using a stretching device before it is attached to the corner posts.

#### 10. Plans for restoration of the surface

Prior to construction of the location, the top 6 inches of soil material will be stripped and stockpiled. This will amount to approximately 1,000 cubic yards of material. Placement of the top soil is noted on the attached location plat. When all drilling and completion activities have been completed the unused portion of the location (the area outside the dead men.) will be recontoured and the topsoil spread over the disturbed area.

The dirt contractor will be provided with an approved copy of the surface use plan prior to construction activities.

Any drainage rerouted during the construction activities shall be restored to its original line of flow or as near as possible.

All disturbed areas will be recontoured to the approximate natural contours. Prior to back filling the pit the fences around the reserve pit will be removed.

The reserve pit will be reclaimed within 90 days of well completion. If the reserve pit has not dried sufficiently to allow back filling, an extension on the time requirement for back filling the pit will be requested. Once reclamation activities have begun, they shall be completed within 30 days.

After the reserve pit has been reclaimed, no depressions in the soil covering the reserve pit will be allowed. The objective is to keep seasonal rain fall and run off from seeping into the soil used to cover the reserve pit. Diversion ditches and water bars will be used to divert run off as needed.

When restoration activities have been completed, the location site and new access road cuts and shoulders shall be reseeded. Prior to reseeding, all disturbed areas will be scarified and left with a rough surface.

#### A) Seeding dates:

After September 15, and before the ground freezes.

Seed will be broadcast or drilled at the time specified by the BLM. If broadcast, a harrow or some other implement will be dragged over the seeded

area to assure seed coverage and the seed mixture will be proportionately larger (double the lbs. per acre).

At such time as the well is plugged and abandoned the operator will submit a surface reclamation plan to the surface management agency for prescribed seed mixture and reseeding requirements.

#### 11. Surface ownership:

Federal

#### 12. Other information

#### A) Vegetation:

The vegetation coverage is slight. The majority of the existing vegetation consists of sage brush. Rabbit brush, bitter brush and indian rice grass are also found on the location.

#### B) Dwellings:

There are no dwellings, or other facilities within a one mile radius of the location.

# C) Archeology:

The location has been surveyed and there are no archaeological, historical, or cultural sites near the proposed site. Please see the attached archaeological clearance map.

If, during operations, any archaeological or historical sites, or any objects of antiquity (subject to the antiquities act of June 8, 1906) are discovered, all operations which would affect such sites will be suspended and the discovery reported promptly to the surface management agency.

#### D) Water:

The nearest water in in the bottom of Asphalt Wash located 2.5 miles to the north.

#### E) Chemicals:

No pesticides, herbicides or other possible hazardous chemicals will be used without prior application.

#### F) Notification:

a) Location construction

At least forty eight (48) hours prior to construction of location and access roads

b) Location completion

Prior to moving on the drilling rig.

c) Spud notice

At least twenty-four (24) hours prior to spudding the well.

d) Casing string and cementing

At least twenty-four (24) hours prior to running casing and cementing all casing strings.

e) BOP and related equipment tests

At least twenty-four (24) hours prior to initialing pressure tests.

f) First production notice

With in five (5) business days after the new well begins, or production resumes after well has been off production for more than ninety 90 days.

#### H) Flare pit

The flare pit will be located a minimum of 30 feet from the reserve pit fence and 100 feet from the bore hole on the south and west side of the location, between points 5 and 6 on the location plat. All fluids will be removed from the pit within 48 hours of occurrence.

#### 12. Lessees or Operator's representative and certification

#### A) Representative

Name:

William A. Ryan

Address:

Rocky Mountain Consulting

350 South, 800 East Vernal, Utah 84078

Telephone:

 Office
 801-789-0968

 Fax
 801-789-0970

 Cellular
 801-823-6152

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, onshore oil and gas orders, the applicable laws, regulations, and any applicable notices to lessees.

The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

This drilling permit will be valid for a period of one year from the date of approval. After permit termination, a new application will be filed for approval for any future aperations.

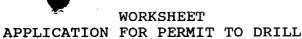
## B) Certification

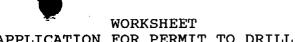
I herby certify that I, or persons under my direct supervision, have inspected the proposed drill-site and access route, that I am familiar with the conditions which presesently exist, that the statements made in this plan are, to the best of my knowledge and belief, true and correct, and that the work associated with the operation proposed herein will be performed by Freedom Energy, Inc. and its contractors and subcontractors in conformity with this plan and terms and conditions with this plan and the terms and conditions under which it is approved.

Date April 10, 1996

William A. Ryan Petroleum Engineer

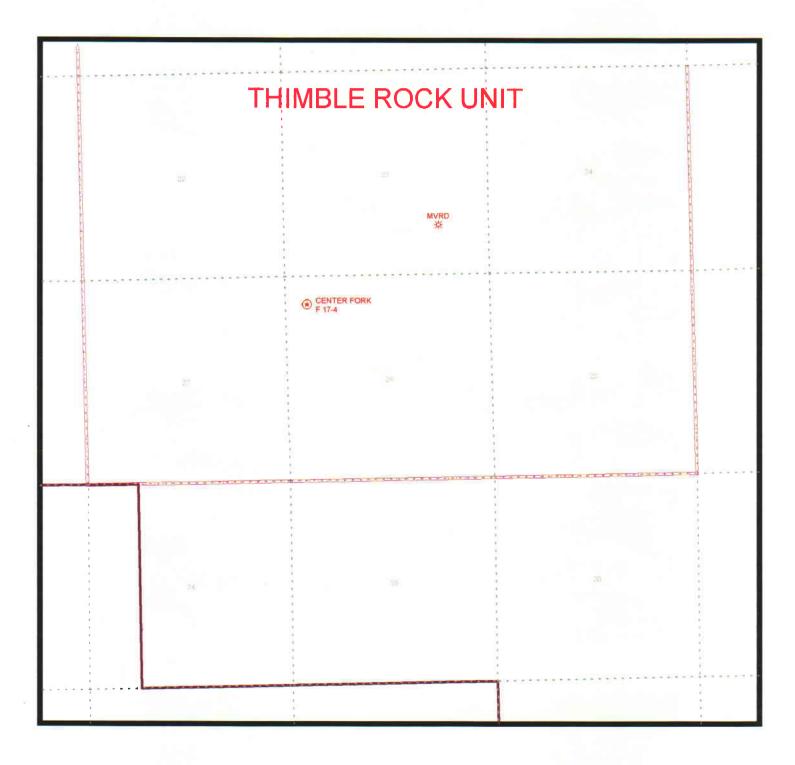
Rocky Mountain Consulting





API NO. ASSIGNED: 43-047-32750 APD RECEIVED: 04/15/96 WELL NAME: CENTER FORK F 17-4 OPERATOR: FREEDOM ENERGY INC (N3285)INSPECT LOCATION BY: PROPOSED LOCATION: NWNW 17 - T12S - R24E TECH REVIEW Initials Date SURFACE: 0580-FWL-0688-FNL BOTTOM: 0580-FWL-0688-FNL UINTAH COUNTY Engineering FIELD () \\\NOES\GNATED Geology LEASE TYPE: FED Surface LEASE NUMBER: UTU-75206 PROPOSED PRODUCING FORMATION: MS LOCATION AND SITING: RECEIVED AND/OR REVIEWED: R649-2-3. Unit: THIMBLE LOCK ✓ Plat Bond: Federal[ State[] Fee[] R649-3-2. General. (Number <u>UT -1001</u>) ✓ Potash (Y/N) R649-3-3. Exception. / Oil shale (Y/N) Water permit Drilling Unit. (Number <u>T 6992</u>( Board Cause no: ✔ RDCC Review (Y/N) Date: (Date: NO WATER USE PERMIT WAS SPECIFIED COMMENTS: TO A WATER USE PERMIT NO. OR SECIFIED STIPULATIONS: LOMMERCIAL SOURCE WILL BE PROVIDED BY SUNDAY THE PRIOR TO COMMENCEMENT OF OFILLING OF TRATIONS.

# FREEDOM ENERGY HANGING ROCK UNIT SEC. 26, T11S, R24E UINTAH COUNTY, UAC R649-3-2



PREPARED: DATE: 15-APR-96

#### **SELF-CERTIFICATION STATEMENT**

The following self-certification statement is provided per Federal requirements dated June 15, 1988.

Please be advised that Freedom Energy, Inc., is considered to be the operator of the following well.

Center Fork F #17-4 NW 1/4, NW 1/4, Sec. 17, T12S, R24E Lease UTU-75206 Uintah County, Utah

Freedom Energy, Inc., is responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

Bond coverage is provided by Certificate of Deposit, BLM Bond #UT-1030.

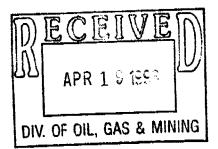
William A. Ryan

Agent

**Rocky Mountain Consulting** 

350 South, 800 East Vernal, UT 84078

801 789-0968 801 823-6152





# DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt Governor Ted Stewart Executive Director

355 West North Temple 3 Triad Center, Suite 350 Salt Lake City, Utah 84180-1203 801-538-5340 801-359-3940 (Fax) James W. Carter Division Director 801-359-3940 (Fax) 801-538-5319 (TDD)

May 28, 1996

Freedom Energy, Inc. 1433 17th Street Suite 300 Denver, Colorado 80202

Center Fork F 17-4 Well, 688' FNL, 580' FWL, NW NW, Sec. 17, Re: T. 12 S., R. 24 E., Uintah County, Utah

#### Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-32750.

Sincerely,

Associate Director

lwp

Enclosures

Uintah County Assessor

Bureau of Land Management, Vernal District Office

WAPD



Operator: _	Freedom Energy, Inc.						
Well Name &	Number: _	Center Fork F 17-4					
API Number:		43-0	47-327	50			
Lease:		UTU-	75206				
Location	พพ พพ	Sec.	17	T.	12 S. R.	24 E.	

#### Conditions of Approval

- 1. General
  Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for Permit to Drill.
- 2. Notification Requirements
  Notify the Division within 24 hours following spudding the well or commencing drilling operations. Contact Jimmie Thompson at (801)538-5340.

Notify the Division prior to commencing operations to plug and abandon the well. Contact Frank Matthews or Mike Hebertson at (801)538-5340.

3. Reporting Requirements
All required reports, forms and submittals shall be promptly
filed with the Division, including but not limited to the
Entity Action Form (Form 6), Report of Water Encountered
During Drilling (Form 7), Weekly Progress Reports for
drilling and completion operations, and Sundry Notices and
Reports on Wells requesting approval of change of plans or
other operational actions.

#### STATE OF UTAH, DIV OF OIL, GAS & MINERALS

Operator: FREEDOM ENERGY INC	Well Name: CENTER FORK F 17-4
Project ID: 43-047-32750	Location: SEC. 17 - T12S - R24E

Design Parameters:	Design Factors:	
Mud weight ( 8.60 ppg) : 0.447 psi/ft	Collapse : 1.125	5
Shut in surface pressure : 1943 psi	Burst : 1.00	
Internal gradient (burst) : 0.050 psi/ft	8 Round : 1.80	(1)
Annular gradient (burst) : 0.000 psi/ft	Buttress : 1.60	(1)
Tensile load is determined using air weight	Other : 1.50	(1)
Service rating is "Sweet"	Body Yield : 1.50	(B)

	Length (feet)	Size (in.)	Weight (lb/ft)	Grade	e Join		Depth (feet)	Drift (in.)	Cost
1	4,900	4.500	11.60	J-55	5 ST&C		4,900	3.875	
	Load (psi)	Collapse Strgth (psi)	S.F.	Burst Load (psi)	Min Int Strgth (psi)	Yield S.F.		Tension Strgth (kips)	S.F.
1	2189	4960	2.266	2189	5350	2.44	56.84	154	2.71 J

Prepared by : MATTHEWS, Salt Lake City, Utah

Date

: 05-28-1996

Remarks

Minimum segment length for the 4,900 foot well is 1,500 feet.

SICP is based on the ideal gas law, a gas gravity of 0.69, and a mean gas

temperature of 108°F (Surface 74°F , BHT 143°F & temp. gradient 1.400°/100 ft.)

String type: Production

The mud gradient and bottom hole pressures (for burst) are 0.447 psi/ft and

2,189 psi, respectively.

NOTE:

The design factors used in this casing string design are as shown above. As a general guideline, Lone Star Steel recommends using minimum design factors of 1.125 - collapse (with evacuated casing), 1.0 - (uniaxial) burst, 1.8 - API 8rd tension, 1.6 - buttress tension, 1.5 - body yield tension, and 1.6 - EUE 8rd tension. Collapse strength under axial tension was calculated based on the Westcott, Dunlop and Kemler curve. Engineering responsibility for use of this design will be that of the purchaser.

Costs for this design are based on a 1987 pricing model. (Version 1.07)

Form 3160-3 (November 1983) (formerly 9-331C)

# UNITED STATES DEPARTMENT OF THE INTERIOR

SUBMIT IN LICATE\*

(Other instructions on reverse side)

Form approved. Budget Bureau No. 1004-0136 Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

	BUKEAU UF	LAND MANAGI	EMENI			UTU-75206	
APPLICATIO	N FOR PERMIT	TO DRILL, D	EEPEN, OR F	LUG B	<b>ACK</b>	6. IF INDIAN, ALLOTTE	OR TRIBE NAME
1a. TYPE OF WORK						7. UNIT AGREEMENT N	
DR	ILL 🗆	DEEPEN [	] <b>PL</b>	UG BAC	ΚШ	1. UNIT AGESSESSE A	445
b. TIPE OF WELL			SINGLE [7]	MULTIPL			
WELL C	AS OTHER		ZONE	EONE	<u>XX</u>	8. FARM OR LEASE NA	K9
2. NAME OF OPERATOR						Center Fork F	
	OV NO					9. WELL NO.	
FREEDOMENER	COT; INC.	~ ^^^	00.000.0440			174	
	ite #300, Denver, 0		03-292-2442			10. FIELD AND POOL,	E WILDCAT
4. LOCATION OF WELL (E	leport location clearly and	in accordance with	any State requireme	ents.*)			
At surface						11. SEC., T., R., M., OR	ELK.
COMPANIA QUATIL	L, NW1/4, NW1/4	SEC 17 T 1	2 S R 24 E				
)O≙r <b>biddinis@@@at</b>	"E", 14 AA 1/4, 14 AA 1/4	, 000. 17, 1. 1				SEC 17 T 12 S	P 24 F
14. DISTANCE IN MILES	AND DIRECTION FROM NEA	REST TOWN OR POST	OFFICE*	******		SEC 17 T 12 S 12. COUNTY OR PARISH	18. STATE
<del>12 MILES SOLIT</del> I	LOF BONANZA	<del>UT -</del>	16. NO. OF ACRES IN	LEASE	17. No. (	P LIENTALLED	<del>' UT</del>
LOCATION TO NEARES	MALLOS PROTURDING F BONANZA, UT LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 580		1,280		TO T	HIS WELL 40	
(Also to nearest dr)	g. unit line, if any)				00 5054	PT OP 04 PLP 5001 F	
18. DISTANCE FROM PROI	POMED LOCATIONS PRILLING, COMPLETED,	[	19. PROPOSED DEPTH		20. ROTARY OR CARLE TOOLS		
OR APPLIED FOR, ON TH		1_	4900'		ROTARY		
21. ELEVATIONS (Show wh	ether DF, RT, GR, etc.)					22. APPROX. DATE WO	ME WILL START
	6212'	<u> </u>	·			MAY 15, 1996	
23.		PROPOSED CASIN	G AND CEMENTING	PROGRAM			
SIZE OF HOLE	BIZE OF CABING	WEIGHT PER PO	OT SETTING	DEPTH	QUANTITY OF CEMENT		
12 1/4	9 5/8	36#	300			TO SURFACE	
7.7/8	4 1/2	<u> 11.6</u> -			CMT TOP TO COVER		
	1 1/2	11.0			THE OIL SHALE		
	i '	1	I	ı		THE OIL OIL	
					O	rm main sseet f	
	OPERATOR I	REQUESTS PI	ERMITION TO	DRILL	THE S	UBJECT WELL	
	PLEASE SEE	THE ATTACI	HED 10 POINT	AND T	HE 13	POINT SURFAC	E
	USE PLAN.						
		יידיניוניו במווי	ONIAI INTEODA	ለ ሲ 'ፓፐር' እ <sup>ነ</sup>	PIEA	SE CONTACT:	
	IF YOU REQU	OIKE ADDITI	JIML INFORT	VIATION	עלדנו	SE CONTACT.	
	117TT T T A B 4 A	DVAN 60 16	प्रात्वा क	100			
	WILLIAM A.	KIAN [[]]) ]	ECEIV				
	350 S., 800 E.				REC	CEIVED	
	350 S., 800 E. VERNAL, UT	1157 [	JUL - 1 199		RE	CEIVED	

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive sone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

William A. Ryan

TITLE Petroleum Eingineer April 8, 1996

PERMIT NO.

APPROVAL DATE

ASSISTANT DISTRICT

APPROVAL DATE

JUN 6 1995

CONDITIONS OF APPROVAL IS AND:

DIV. OF OIL, GAS & MINING

CONDITIONS OF APPROVAL ATTACHED

U+080-6m-101

801-823-6152

\*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

COAs Page 1 of 8 Well No.: Center Fork F 17-4

# CONDITIONS OF APPROVAL APPLICATION FOR PERMIT TO DRILL

Company/Operator: Freedom Energy, Inc.
Well Name & Number: Center Fork F 17-4
API Number: <u>43-047-32750</u>
Lease Number: U - 75206
Location: <u>NWNW</u> Sec. <u>17</u> T. <u>12S</u> R. <u>24E</u>

#### NOTIFICATION REQUIREMENTS

**Location Construction** 

at least forty-eight (48) hours prior to construction of

location and access roads.

**Location Completion** 

prior to moving on the drilling rig.

Spud Notice

at least twenty-four (24) hours prior to spudding the well.

Casing String and

Cementing

at least twenty-four (24) hours prior to running casing and

cementing all casing strings.

BOP and Related **Equipment Tests** 

at least twenty-four (24) hours prior to initiating pressure

tests.

First Production

Notice

within five (5) business days after new well begins, or

production resumes after well has been off production for

more than ninety (90) days.

For more specific details on notification requirements, please check the Conditions of Approval for Notice to Drill and Surface Use Program.

COAs Page 2 of 8 Well No.: Center Fork F 17-4

#### CONDITIONS OF APPROVAL FOR NOTICE TO DRILL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Orders, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

NOTE - The lease for this proposed well is in it's extended term, therefore, production in paying quantities must be established from the lease hold prior to November 21, 1996.

Be aware fire restrictions may be in effect when location is being constructed and/or when well is being drilled. Contact the appropriate Surface Management Agency for information.

#### A. DRILLING PROGRAM

1. <u>Estimated Depth at Which Oil, Gas, Water, or Other Mineral Bearing Zones are</u> Expected to be Encountered

Report <u>ALL</u> water shows and water-bearing sands to Tim Ingwell of this office. Copies of State of Utah form OGC-8-X are acceptable. If noticeable water flows are detected, submit samples to this office along with any water analyses conducted.

All usable water and prospectively valuable minerals (as described by BLM at onsite) encountered during drilling, will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

#### 2. Pressure Control Equipment

The BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc., for a 3M system and individual components shall be operable as designed. Chart recorders shall be used for all pressure tests.

Test charts, with individual test results identified, shall be maintained on location while drilling and shall be made available to a BLM representative upon request.

If an air compressor is on location and is being utilized to provide air for the drilling medium while drilling, the special drilling requirements in Onshore Oil and Gas Order No. 2, regarding air or gas drilling shall be adhered to. If a mist system is being utilized then the requirement for a deduster shall be waived.

COAs Page 3 of 8 Well No.: Center Fork F 17-4

The Vernal District Office shall be notified, at least 24 hours prior to initiating the pressure tests, in order to have a BLM representative on location during pressure testing.

## 3. Casing Program and Auxiliary Equipment

Surface casing shall have centralizers on the bottom three joints, with a minimum of one centralizer per joint.

As a minimum, the usable water and oil shale resources shall be isolated and/or protected by having a cement top for the production casing at least 200 ft. above the top of the Mahogany oil shale zone, identified at 727 ft. If gilsonite is encountered while drilling, it shall be isolated and/or protected via the cementing program.

The Vernal District Office shall be notified at least 24 hours prior to the running and cementing of all casing strings, in order to have a BLM representative on location while running and cementing all casing strings.

#### 4. Mud Program and Circulating Medium

Hazardous substances specifically listed by the EPA as a hazardous waste or demonstrating a characteristic of a hazardous waste will not be used in drilling, testing, or completion operations.

No chromate additives will be used in the mud system on Federal and Indian lands without prior BLM approval to ensure adequate protection of fresh water aquifers.

#### 5 .Coring, Logging and Testing Program

Daily drilling and completion progress reports shall be submitted to this office on a weekly basis.

All Drill Stem tests (DST) shall be accomplished during daylight hours, unless specific approval to start during other hours is obtained from the AO. However, DSTs may be allowed to continue at night if the test was initiated during daylight hours and the rate of flow is stabilized and if adequate lighting is available (i.e., lighting which is adequate for visibility and vaporproof for safe operations). Packers can be released, but tripping should not begin before daylight unless prior approval is obtained from the AO.

A cement bond log (CBL) will be run from the production casing shoe to  $\pm$  527 ft., and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office. A Sonic log will be run from TD to a minimum of 200 ft above the top of the Mahogany oil shale.

COAs Page 4 of 8 Well No.: Center Fork F 17-4

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. Samples (cuttings, fluids, and/or gases) will be submitted when requested by the AO.

#### 6. Notifications of Operations

No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the AO. If operations are to be suspended, prior approval of the AO will be obtained and notification given before resumption of operations.

The Vernal District Office shall be notified, during regular work hours (7:45 a.m.-4:30 p.m., Monday through Friday except holidays), at least 24 hours **prior** to spudding the well.

Operator shall report production data to MMS pursuant to 30 CFR 216.5 using form MMS/3160.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported in accordance with the requirements of NTL-3A or its revision.

If a replacement rig is contemplated for completion operations, a "Sundry Notice" (Form 3160-5) to that effect will be filed, for prior approval of the AO, and all conditions of this approved plan are applicable during all operations conducted with the replacement rig.

The date on which production is commenced or resumed will be construed for oil wells as the date on which liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which liquid hydrocarbons are first produced into a permanent storage facility, whichever first occurs; and, for gas wells as the date on which associated liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which gas is first measured through permanent metering facilities, whichever first occurs.

Should the well be successfully completed for production, the AO will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, not later than five (5) days following the date on which the well is placed on production.

COAs Page 5 of 8 Well No.: Center Fork F 17-4

Gas produced from this well may not be vented or flared beyond an initial authorized test period of 30 days or 50 MMCF following its completion, whichever occurs first, without the prior written approval of the Authorized Officer. Should gas be vented or flared without approval beyond the authorized test period, the operator may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted and the operator shall be required to compensate the lessor for that portion of the gas vented or flared without approval which is determined to have been avoidably lost.

A schematic facilities diagram as required by 43 CFR 3162.7-2, 3162.7-3, and 3162.7-4 shall be submitted to the appropriate District Office within thirty (30) days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 43 CFR 3162.7-4.

No well abandonment operations will be commenced without the prior approval of the AO. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the AO. A "Subsequent Report of Abandonment" Form 3160-5, will be filed with the AO within thirty (30) days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration. Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the AO or his representative, or the appropriate Surface Managing Agency.

#### 7. Other Information

All loading lines will be placed inside the berm surrounding the tank battery.

All off-lease storage, off-lease measurement, or commingling onlease or off-lease will have prior written approval from the AO.

The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy will be conducted on initial meter installations and at least quarterly thereafter. The AO will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the Vernal District Office. All meter measurement facilities will conform with Onshore Oil & Gas Order No. 4 for liquid hydrocarbons and Onshore Oil & Gas Order No. 5 for natural gas measurement.

The use of materials under BLM jurisdiction will conform to 43 CFR 3610.2-3.

COAs Page 6 of 8 Well No.: Center Fork F 17-4

There will be no deviation from the proposed drilling and/or workover program without prior approval from the AO. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.

"Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.

Section 102(b)(3) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3162.4-1(c), requires that "not later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed."

If you fail to comply with this requirement in the manner and time allowed, you shall be liable for a civil penalty of up to \$10,000 per violation for each day such violation continues, not to exceed a maximum of 20 days. See Section 109(c)(3) of the Federal Oil and Gas Royalty Management Act of 1982 and the implementing regulations at Title 43 CFR 3162.4-1(b)(5)(ii).

The APD approval is valid only until November 21, 1996 unless production is established from another well within the lease prior to that date. If production in paying quantities is established prior to that date then the APD is valid for a period of one (1) year from the signature date. An extension period may be granted, if requested, prior to the expiration of the original approval period, if production in paying quantities has been established from another well from within the lease hold.

In the event after-hours approvals are necessary, please contact one of the following individuals:

Ed Forsman

(801) 789-7077

Petroleum Engineer

Wayne P. Bankert

(801) 789-4170

Petroleum Engineer

Jerry Kenczka

(801) 789-1190

Petroleum Engineer

BLM FAX Machine

(801) 781-4410

COAs Page 7 of 8

Well No.: Center Fork F 17-4

#### EPA'S LIST OF NONEXEMPT EXPLORATION AND PRODUCTION WASTES

While the following wastes are nonexempt, they are not necessarily hazardous.

Unused fracturing fluids or acids

Gas plant cooling tower cleaning wastes

Painting wastes

Oil and gas service company wastes, such as empty drums, drum rinsate, vacuum truck rinsate, sandblast media, painting wastes, spend solvents, spilled chemicals, and waste acids

Vacuum truck and drum rinsate from trucks and drums, transporting or containing nonexempt waste

Refinery wastes

Liquid and solid wastes generated by crude oil and tank bottom reclaimers

Used equipment lubrication oils

Waste compressor oil, filters, and blowdown

Used hydraulic fluids

Waste solvents

Waste in transportation pipeline-related pits

Caustic or acid cleaners

Boiler cleaning wastes

Boiler refractory bricks

Incinerator ash

Laboratory wastes

Sanitary wastes

Pesticide wastes

Radioactive tracer wastes

Drums, insulation and miscellaneous solids.

COAs Page 8 of 8 Well No.: Center Fork F 17-4

# SURFACE USE PLAN OF OPERATIONS Conditions of Approval (COAs)

#### Other Additional Information:

a. The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

-whether the materials appear eligible for the National Register of Historic Places;

-the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and

-a time frame for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate

If the operator wishes, at any time, to relocate activities to avoid expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that required mitigation has been completed, the operator will then be allowed to resume construction.

- b. The operator will control noxious weeds along rights-of -way for roads, pipelines, well sites, or other applicable facilities. A list of noxious weeds may be obtained from the BLM, or the appropriate County Extension Office. On BLM administered lands it is required that a Pesticide Use Proposal shall be submitted, and given approval, prior to the application of herbicides or other pesticides or hazardous chemicals.
- c. The following conditions apply:

When the pad is built for well 17-4, Freedom Energy shall also construct an erosion control pond about 600 feet East of the well. This could also be described as about 400 feet east of where the access road enters the pad.

The proposed surface flowline will follow existing roads north to it's tie in with the gathering line in the SE of Section 6. Road crossings will be placed as needed to avoid existing fences and the cultural resource site 42Un2278 which is described in the survey by Sagebrush Archaeological Consultants.

The flowline will be about 9000 feet in length.

#### CONDITIONS OF APPROVAL FOR THE SURFACE GAS LINE

- 1. No blading will be allowed on surface pipelines unless the Vernal Field Office minerals staff are consulted and approval has been obtained prior to the blading.
- 2. Greg Darlington of the Vernal Office Minerals Staff will be notified 24 hours prior to the start of construction.
- 3. Surface lines will be either black or brown in color. The color of the pipeline should be similar to the color of the well pad facilities in the vicinity.
- 4. Pipeline construction will not occur during periods of wet soil conditions. Rutting can create severe soil erosion problems, especially on steep slopes. Operations should cease until soils are dry or frozen to avoid erosion rutting and related runoff problems.
- The surface gas line shall not block or change the course of existing drainages.
   Drainage crossings will be designed to prevent damage to the flowline during periods of high seasonal and storm runoff in the area affected.
- 6. If cultural resources are found during construction, all work which could impact these resources will stop and the Vernal Field Office will be notified.
- 7. Vehicle use will be restricted to the pipeline route in off road areas. It will be authorized there as needed for construction and maintenance and operations on the lease.
- 8. The metering of all gas production will be done in accordance with Onshore Order No. 5.

## DIVISION OF OIL, GAS AND MINING

## SPUDDING INFORMATION

Name of Company: FREEDOM ENERGY
Well Name: CENTER FORK F 17-4
Api No. 43-047-32750
Section 17 Township 12S Range 24E County UINTAH
Drilling Contractor NABORS
Rig #: 8
SPUDDED:
Date: 10/10/96
Time:
How: ROTARY
Drilling will commence:
Reported by: PAUL FRANKS
Telephone #:
Date: 10/8/96 Signed: JLT

#### FREEDOM ENERGY, INC.

CENTER FORK F 17-4 580' FNL, 688' FWL NW/NW-SEC.17-T12S-R24E UINTAH COUNTY, UTAH

API # 43-047-32750 LEASE # UTU-75206 GL: 6212' KB: 6224'

**DIRECTIONS:** SOUTH OF VERNAL ON HYWY 45, 40 MILES TO BLM (END OF PAVEMENT SIGN). TURN LEFT, 3.8 MILES TO "Y" IN ROAD. BLM (ATCHEE RIDGE, RAINBOW SIGN), RIGHT 8.2 MILES TO "Y" IN ROAD. BLM (ASPHALT DRAW ALLOTMENT SIGN), LEFT .5 MILES TO "Y" IN ROAD. BLM (RAINBOW, KINGS WELL SIGN), RIGHT 6.8 MILES, SOUTH 1.5 MILES, LEFT OFF ROAD TO LOCATION.

O9-08-96 MIRU Stubbs and Stubbs. Build location. Had to blast north end of reserve pit.

09-14-96 Spud with Bill Jr's, rathole,

09-15-96 Drill 320' 12-1/4" hole. Run casing. Guide shoc, 8 jts.- 9-5/8"-40#-STC-ncw, set @ 311'G.L. Ran 5 centralizers every other jt. Baffle first collar above shoc. MIRU B.J. Services. Pump 5 bbls. mud filush, 20 bbls. H2O, 183 sks. class G. 1/4# per sk. cello-flakes, 2% CaCL Circ. 12 bbls. slurry to pit. Good returns. Float did not hold. S.I.

09-24-96 Dig cellar. Install 11"-3m X 9-5/8" wellhead.

09-26-96 MIRU Nabors Rig # 908.. Have to move crows to another rig. Will not spud at this time.

10-11-96 DRLG @ 779'. 451' in 8.5 hrs. R.P.M.-55/100; P.P.-950; W.O.B.-12M; Drlg. with water. Bit # 1: 7-7/8", Recd, HP53A. In-328'. Surveys: 652'-1.75 deg. Drlg.-8.5; Trip-2; Surveys.5; Drill cement plug-2; test B.O.P.-6; P.U. Tools-2; R.U.-3 BHA: Bit, M.M., 22 D.C.-677.57' Drill out surface @ 7:00 P.M. 10-10-96

10-12-96 DRLG. @ 2602'. 1823' in 20.5 hrs. R.P.M.- 55/100; P.P.- 950/1200; W.O.B.- 35M; Visc.- 45; Wt.- 8.9#; F.L.- 13.6; F.C.- 2/32; Ph.- 9; P.V.- 13; Y.P.- 18; Gels-Init.-8; 10 min.- 15; T.H.- 120; Surveys: 1181'- 2 deg.: 1708'- 2.75 deg.; 2170'- 3 deg. Drlg.-20.5 Surveys-1.5; R.S.- .5; R.R.- 1.5

10-13-96 DRLG. (@ 3511'. 909' in 22.5 hrs. R.P.M.- 55/100; P.P.- 1050/1250; W.O.B.- 35M; Visc.- 41; Wt.- 9.1#; F.L.- 9.6; F.C.- 1/32; Ph.-9.5; Chl.- 200 ppm.; P.V.- 12; Y.P.- 6; Gcls-Init-1; 10 min.- 4; Solids- 5.6%; T.H.- 240; Surveys: 2756'- 2 deg.; 3253'- 2.5 deg.; Drlg.- 22.5; Cumm. Drlg.- 51.5; Surveys- 1; R.S. 5

10-14-96 DRLG. @ 3943'. 432' last 24 hrs. R.P.M.- 80; P.P.-1050psi.; W.O.B.-42M: Visc.-43; Wt.-9.1; F.L.-8; F.C-1/32; Ph.-9; Chl.- 200ppm; P.V.-19; Y.P.-22; Gels-Init.-2; 10min.-8; T.H.-80; Solids-4.7%; T.H.-80; Surveys: 3253'-2.5deg.; 3553'-3.25 deg. Drlg.-16.5 Trip-5; W&R-1; R.R.-5; P.U. Tools-1; T.O.O.H. Lay down mud motor. P.U. 2 drill collars. T.I. H. with bit #1. Strap out. 3' down hole correction. Recorded 600u. trip gas.

- 10-15-96 Making connection @ 4051'. Pulled kelly to bushings, pipe stuck @ 4007'. Could not rotate, circ., or move up or down. Work pipe for 7 hrs. MIRU Dia-Log. Run free-point. Pipe stuck @ bit. Perf. 2 shots in bit sub. Work fish for 3 hrs. Started moving some fluid aaround fish. R.U. surface jars. Jar for 1.5 hrs. Move fish down hole. Circ. and condition hole. Work through tight spot. (4006'-3970'). Tight spot @ 3780'. T.O.O.H. Made 108' in 3 hrs. Cumm. hrs.-71; Drlg.-3; Trip-4; Work stuck pipe-17;
- 10-16-96 Drlg. @ 4575'. 524' in 14.5 hrs. R.P.M.-55/100; W.O.B.-35m; Visc.-43; Wt.-9.3; F.C.-1/32; Ph.-9; Chl.-200; P.V.-18; Y.P.-12; Gels.-Init. 2; 10 min.-6; T.H.-80; Water-93%; Solids-7%. Surveys: 4075' 2 deg. Bit # 1: c54319, 7-7/8, Reed, HP53A, 14/14/15, In: 328; Out-4051', 3823' in 71 hrs. Bit # 2: C 54824, 7-7/8, Reed, HP 53A, 15/15/16, In: 4051' Out-4152', 101' in 3 hrs. Bit #3: H17723, 7-7/8, Smith, F3H, 15/15/16, fn: 4152'. Drlg-14.5; Trip-6.5; Survey-.5; W&R-1; PU Tools-1.5; up. T.O.O.H. P.U. Bit #3.
- 10-17-96 Logging. 175' in 6.5 hrs. Cumm. Drlg.- 92 hrs.

  Bit # 3: LLH7723, 7-7/8", STC, F3H, 15/15/16, In-4152'. Out- 4750', 598' in 11.5 hrs.

  T.D. @ 4750'. Condition hole. T.O.O.H. MIRU Schlumberger. Stack out @ 3844'.

  Lay down tool. T.I.H. with drill pipe. Push boot to bottom. Circ. 1 hr. Short trip

  10 stds. T.O.O.H. R. U. Schlumberger @ 4:00 a.m. L.T.D. 4748'. Run Array Induction, with gamma ray and CNDL. Done logging @ 8:00 A. M.

  Drlg.: 6.5, Trips- 7.5; Logging- 7.5; C&C- 2.5
- 10-18-96 CMR tool woould not work. Hotshot tool from Casper. 9 hrs. wait on tools. Start in hole with CMR @ 5:00p.m. Out of hole @ 11:30p.m. TIH. Circ. 1 hr. LDDP. Trip-2.5; Log- 5.5; Circ.- 2; PU. Tools- 2; Wait on logging tool- 9;
- 10-19-96 LDDP, Run casing. Bump plug @ 1:30p.m. Float did not hold. Shut in. Slips set 3:00p.m. Rig Release: 8:00p.m.

#### COMPLETION: CENTER FORK F 17-4

10-19-96 Rum casing. 62 jts. 4-1/2", 11.6 #, 8rd., I-70, new, tested to 6200psi.; Ran 47 jts. 4-1/2", 11.6#, 8rd., J-55, new, tested to 4900 psi. Ran guide shoe, 1 jt., float collar, with 20 centrilizers. Total: 109 jts. landed @ 4739.84' k.b. PBTD: 4696.07' k.b. MIRU B.J. Services. Pump 20 bbls H2O. Cement with 250 sks. class G, 16% gcl., 3% salt, 10#/sk. gilsonite. Yield- 3.92 cu. ft./sk. Pump 385 sks. class G, 10% gypsum, 4% FL-25, .2% R-3, 10% salt. Yield- 1.53 cu.ft./sk. Disp. with 72 bbls. 2% KCL. Bump plug to 2500 psi. @ 1:30 p.m. Float did not hold. Rebump plug. Float did not hold. Rebump plug. S.I. @ 400 psi. above circ. pressure. Circ. approx. 20 bbls. slurry to pit. Good returns. Set. slips. Transfer 7 jts. 4-1/2", J-55 to Toby Fed. F 6-15. (307.90') R.R. 8:00p.m. 10-19-96

#### FREEDOM ENERGY, INC.

CENTER FORK F 17-4 580' FNL, 688' FWL NW/NW-SEC.17-T12S-R24E UINTAH COUNTY, UTAH API # 43-047-32750 Lease# UTU-75206 GL: 6212' KB: 6224'

**DIRECTIONS:** SOUTH OF VERNAL ON HYWY 45, 40 MILES TO BLM (END OF PAVEMENT SIGN). TURN LEFT, 3.8 MILES TO "Y" IN ROAD. BLM (ATCHEE RIDGE, RAINBOW SIGN), RIGHT 8.2 MILES TO "Y" IN ROAD. BLM (ASPHALT DRAW ALLOTMENT SIGN), LEFT .5 MILES TO "Y" IN ROAD. BLM (RAINBOW, KINGS WELL SIGN), RIGHT 6.8 MILES, SOUTH 1.5 MILES, LEFT OFF ROAD TO LOCATION.

O9-08-96 MIRU Stubbs and Stubbs. Build location. Had to blast north end of reserve pit.

D.C. \$10,100 C.C. \$10,100

09-14-96 Spud with Bill Jr's. rathole.

09-15-96 Drill 320' 12-1/4" hole. Run casing. Guide shoe, 8 jts.- 9-5/8"-40#-STC-new, set @ 311'G.L. Ran 5 centralizers every other jt. Baffle first collar above shoe. MIRU B.J. Services. Pump 5 bbls. mud fllush, 20 bbls. H2O, 183 sks. class G, 1/4# per sk. cello-flakes, 2% CaCL Circ. 12 bbls. slurry to pit. Good returns. Float did not hold. S.I.

D.C. \$15,924

C.C. \$26,024

09-24-96 Dig cellar. Install 11"-3m X 9-5/8" wellhead.

D.C. \$1,500

C.C. \$27,524

09-26-96 MIRU Nabors Rig # 908.. Have to move crews to another rig. Will not spud at this time.

10-11-96 DRLG @ 779'. 451' in 8.5 hrs. R.P.M.-55/100; P.P.-950; W.O.B.-12M; Drlg. with water. Bit # 1: 7-7/8", Reed, HP53A, In-328'. Surveys: 652'- 1.75 deg. Drlg.-8.5; Trip-2; Survey-.5; Drill cement plug-2; test B.O.P.-6; P.U. Tools-2; R.U.- 3
BHA: Bit, M.M., 22 D.C.- 677.57' Drill out surface @ 7:00 P.M. 10-10-96
D.C. \$11,444
C.C. \$38,968

10-12-96 DRLG. @ 2602'. 1823' in 20.5 hrs. R.P.M.- 55/100; P.P.- 950/1200; W.O.B.- 35M; Visc.- 45; Wt.- 8.9#; F.L.- 13.6; F.C.- 2/32; Ph.- 9; P.V.- 13; Y.P.- 18; Gels-Init.-8; 10 min.- 15; T.H.- 120; Surveys: 1181'- 2 deg.; 1708'- 2.75 deg.; 2170'- 3 deg. Drlg.-20.5 Surveys-1.5; R.S.- .5; R.R.- 1.5 SHOW: 2502'-2520' D.R. Before During After

1.6 .65

Gas 20u. 1650u. 30u.

D.C. \$42,323

C.C. \$81,291

10-13-96 DRLG.; @ 3511'. 909' in 22.5 hrs. R.P.M.- 55/100; P.P.- 1050/1250; W.O.B.- 35M; Visc.- 41; Wt.- 9.1#; F.L.- 9.6; F.C.- 1/32; Ph.-9.5; Chl.- 200 ppm.; P.V.- 12; Y.P.- 6; Gels-Init-1; 10 min.- 4; Solids- 5.6%; T.H.- 240; Surveys: 2756'- 2 deg.; 3253'- 2.5 deg.; Drlg.- 22.5; Cumm. Drlg.- 51.5; Surveys- 1; R.S.- .5;

SHOWS: DRILL RATE - Before During After Gas: Before During After 2769-2790 1.6 .4 20 u. 350 u. 35 u. 3110-3114 1.4 .5 1.5 37 u. 165 u. 36 u. 3131-3139 1.4 .37 1.4 37 u. 800 u. 35 u. C.C. \$100,576 D.C. \$19,285

10-14-96 DRLG. @ 3943'. 432' last 24 hrs. R.P.M.- 80; P.P.-1050psi.; W.O.B.-42M; Visc.-43; Wt.-9.1; F.L.-8; F.C-1/32; Ph.-9; Chl.- 200ppm; P.V.-19; Y.P.-22; Gels-Init.-2; 10min.-8; T.H.-80; Solids-4.7%; T.H.-80; Surveys: 3253'-2.5deg.; 3553'-3.25 deg. Drlg.-16.5 Trip-5; W&R-1; R.R.-.5; P.U. Tools-1; T.O.O.H. Lay down mud motor. P.U. 2 drill collars. T.I. H. with bit #1. Strap out. 3' down hole correction. Recorded 600u. trip gas.

D.C. \$10,898

C.C. \$111,474

10-15-96 Making connection @ 4051'. Pulled kelly to bushings, pipe stuck @ 4007'. Could not rotate, circ., or move up or down. Work pipe for 7 hrs. MIRU Dia-Log. Run free-point. Pipe stuck @ bit. Perf. 2 shots in bit sub. Work fish for 3 hrs. Started moving some fluid aaround fish. R.U. surface jars. Jar for 1.5 hrs. Move fish down hole. Circ. and condition hole. Work through tight spot. (4006'-3970'). Tight spot @ 3780'. T.O.O.H. Made 108' in 3 hrs. Cumm. hrs.- 71; Drlg.- 3; Trip- 4; Work stuck pipe- 17; SHOWS: DRILL RATE: Before During After GAS: Before During After 5. 3950-3962 1 .5 1 20u. 150u. 20u. 6. 3994-4016 2.5 2.5 1 20 u. 580 u. 20u. D.C. \$4073 C.C \$115,547

10-16-96 Drlg. @ 4575'. 524' in 14.5 hrs. R.P.M.-55/100; W.O.B.-35m; Visc.- 43; Wt.- 9.3; F.C.- 1/32; Ph.- 9; Chl.- 200; P.V.- 18; Y.P.- 12; Gels.- Init. 2; 10 min.- 6; T.H.- 80; Water- 93%; Solids- 7%. Surveys: 4075' - 2 deg.

Bit # 1: c54319, 7-7/8, Reed, HP53A, 14/14/15, In: 328; Out-4051', 3823' in 71 hrs. Bit # 2: C 54824, 7-7/8, Reed, HP 53A, 15/15/16, In: 4051' Out-4152', 101' in 3 hrs. Bit #3: H17723, 7-7/8, Smith, F3H, 15/15/16, In: 4152'. Drlg-14.5; Trip-6.5; Survey-.5; W&R-1; PU Tools-1.5; Cumm. Drlg.-85.5 hrs.

T.I.H. with bit number 2. Drill 101 ft. Bit locked up. T.O.O.H. P.U. Bit #3.

Shows: Drilling Rate: Before During After Gas: Before During After 4230-42339 l .5 1 5u. 680u. 4287-4303 .5 1.3 .5 25u. 1440u. 25 u. 4306-4326 1 .5 1.3 25u. 125u. 25u. 4396-4429 2 1 2 25u. 260u. 25u. 4450-4465 .5 1.5 l 40u. 540u. 40u. 4520-4540 2.3 .5 2.3 20u. 2520u. 760u.

D.C. \$13,444 C.C. \$128,991

10-17-96 Logging, 175' in 6.5 hrs. Cumm. Drlg.- 92 hrs.

Bit # 3: LLH7723, 7-7/8", STC, F3H, 15/15/16, In-4152'. Out- 4750', 598' in 11.5 hrs.

T.D. @ 4750'. Condition hole. T.O.O.H. MIRU Schlumberger. Stack out @ 3844'.

Lay down tool. T.I.H. with drill pipe. Push boot to bottom. Circ. 1 hr. Short trip

10 stds. T.O.O.H. R. U. Schlumberger @ 4:00 a.m. L.T.D. 4748'. Run Array Induction,

Drlg.: 6.5, Trips- 7.5; Logging- 7.5; C&C- 2.5 D.C. \$5313 C.C. \$134,304

with gamma ray and CNDL. Done logging @ 8:00 A. M.

10-18-96 CMR tool woould not work. Hotshot tool from Casper. 9 hrs. wait on tools.

Start in hole with CMR @ 5:00p.m. Out of hole @ 11:30p.m. TIH. Circ. 1 hr. LDDP.

Trip-2.5; Log- 5.5; Circ.- 2; PU. Tools- 2; Wait on logging tool- 9;

D.C. \$19,335

C.C. \$153,639

10-19-96 LDDP. Run casing. Bump plug @ 1:30p.m. Set slips @ 3:00p.m. R.R. 8:00p.m. D.C. \$3758 C.C. \$157,397

#### **COMPLETION CENTER FORK F 17-4**

10-19-96 Run casing. 62 jts. 4-1/2", 11.6 #, 8rd., I-70, new, tested to 6200psi.; Ran 47 jts. 4-1/2", 11.6#, 8rd., J-55, new, tested to 4900 psi. Ran guide shoe, 1 jt., float collar, with 20 centrilizers. Total: 109 jts. landed @ 4739.84' k.b. PBTD: 4696.07' k.b. MIRU B.J. Services. Pump 20 bbls H2O. Cement with 250 sks. class G, 16% gel., 3% salt, 10#/sk. gilsonite. Yield- 3.92 cu. ft./sk. Pump 385 sks. class G, 10% gypsum, .4% FL-25, .2% R-3, 10% salt. Yield- 1.53 cu.ft./sk. Disp. with 72 bbls. 2% KCL. Bump plug to 2500 psi. @ 1:30 p.m. Float did not hold. Rebump plug. Float did not hold. Rebump plug. S.I. @ 400 psi. above circ. pressure. Circ. approx. 20 bbls. slurry to pit. Good returns. Set. slips. Transfer 7 jts. 4-1/2", J-55 to Toby Fed. F 6-15. (307.90') R.R. 8:00p.m. 10-19-96 D.C. \$32,784 C.C.C. \$32,784 C.D.C. \$157,397 C.W.C. \$190,181

10-24-96 Clean location. Set anchors.

10-29-96 MIRU Duco Well Service. Spot pump and tank. Unload, rabbit, tally 163 jts. 2-3/8", 4.6#, 8rd. tubing. Total tally: 5026.75'. P.U. 3-7/8" bit and scraper. Tally tubing in hole. Tag @ 4697' K.B. T.O.O.H. S.I.

D.C. \$22,977 C.C.C. \$55,761 C.D.C. \$157,397 C.W.C. \$213,158

10-30-96 MIRU Schlumberger. Run CBL/VDL/GR. from L.T.D. @ 4690'. to surface. Corr. to CND/GR log dated 10-17-96. Excellent bond. Perf. Mesa-Verde- 4522'-4528', 6', 4 s.p.f. 3-1/8" HEG charge. P.U. S.N. and knotched collar. T.I.H. Land tubing. 146 jits. landed @ 4506'. 4515' K.B. Install master valve. Break formation down with 2% K.C.L. Pressure up to 3400 p.s.i. Slight bleed off but could not establish rate. Will spot acid in a.m. Swab down to 2400'. Recovered trace of gas. S.I.

D.C. \$7017 C.C.C. \$62,778 C.D.C. \$157,397 C.W.C. \$220,175

10-31-96 T.P.-400 p.s.i. C.P.- 450 p.s.i. Bleed pressure off tubing. Pull 1 swab. Hit gas cut fluid @ 1200'. P.U. 1 jt. tubing. Land tubing, 147 jts. landed @ 4540' k.b. MIRU B.J. Services. Circ. gas out of hole. Spot 500 gal. 7-1/2% HCL with 1 gal. CL-22, 3 Gal. XL-21, 1 gal. Hine-40, 1 gal. clay treat. Spot acid across perfs. Shut annulus. Disp. 2.2 b.p.m. @ 3800 p.s.i. Increased rate throughout job to 3.7 b.p.m. @ 3400 p.s.i. ISDP: 2400 p.s.i. 5 min: 2000 p.s.i., 10 min: 1900 p.s.i., 15 min: 1600 p.s.i. Load to recover with casing volumn: 74 bbls. Start swabbing @ 10:00 a.m. Recovered 82 bbls. in 5.5 hrs. Last 4 swabs recovered gas cut fluid from 2000' to S.N. @ 4540'. Well would flow for 10 to 15 min. after swab. Steady gas blow but not measurable rate. Left open on 24/64" choke. Ending C.P.- 400 p.s.i.

D.C. \$4575

C.C.C. \$67353 C.D.C. \$157,397

C.W.C. \$224,750

11-01-96 T.P.- 0 p.s.i. C.P.- 1550 p.s.i. F.L.- 200'. Pull 2 swabs. Well started flowing. Flowed 40 min. C.P. dropped to 320 p.s.i. Steady stream of water. Catch water sample. Circ. hole. Lay down 9 jts. of tubing. TOOH. MIRU Schlumberger. Set CIBP @ 4500'. Pressure test CIBP to 3500 p.s.i. Perf. 4292'-4302', 10', 4 s.p.f. with 3-1/2-37 j charges. TIH. Land tubing 138 jts. landed @ 4265' k.b. Break down formation with rig pump. (2%KCL). 1.5 b.p.m. 2400 p.s.i. ISDP: 2200 p.s.i.; 5 min.- 700 p.s.i.; 10 min.- 200 p.s.i.; 15 min.- 50 p.s.i. Swab back. 60 bbls. in 8 runs. Hole volumn: 59.5 bbls. Steady blow on tubing and casing. Left open to tank on 24/64" choke.

WATER SAMPLE: 4522-4528: S.P.- 1.005 @ 70 deg. F.; PH- 7; Res: .300 ohms. @ 70 deg. F. Iron- 25 ppm; Calcium- 259 ppm; Magnesium- 206 ppm; Chlorides- 5969 ppm. Sodium-Potassium- 6634 ppm.; Sulfate- 80 ppm.; T.H.- 1,493 ppm; Bicarbonate- 1821 ppm. Sodium Chloride- 9,819 ppm.; T.D.S.- 15,997 ppm.

D.C. \$6586

C.C.C. \$73,939 C.D.C. \$157,397

C.W.C.- \$231,336

11-02-96 F.T.P.- 100 p.s.i. C.P.- 575 p.s.i. Flowing water and gas. Remove choke. Unload fluid. 7:30 a.m.- T.P. 30 p.s.i. C.P.- 200 p.s.i. Pull 1 swab. Install tester. Making to much water. Hool up flow line to frac tank through 24/64" choke. F.T.P.- 115 p.s.i. C.P.- 525 p.s.i. T.G. 1'-6" @ 11:00 a.m. Release rig crew.

D.C. \$1370 C.C.C. \$75,309 C.D.C \$157,397 C.W.C. \$232,701

11-03-96 F.T.P. 110 p.s.i. C.P. 500 p.s.i. T.G. 4'. Made 108 bbls. of water in 21 hrs. Circ. hole. TOOH. MIRU Schlumberger. Set CIBP @ 4270'. Pressure test plug to 3500 p.s.i. Perf. Mesa-Verde: 4234'-4240', 6', 4 s.p.f. 3-1/2 37J charges. TIH. Land tubing. 136 jts. landed @ 4206'k.b. Break down with 2% KCL. Formation break @ 3200 p.s.i. Pump 1.5 b.p.m. @ 1800 p.s.i. ISDP- 1400 p.s.i.; 5 min.- 400 p.s.i.; 10 min.- 200 p.s.i.; 15 min- 100 p.s.i.; P.U. swab. Hole volumn- 58 bbls. Swab back 55 bbls. in 13 swabs. Ending fluid level- 3200'. Highly gas cut fluid. Left open to frac tank on 24/64" choke. C.P.- 140 p.s.i. D.C. \$5903 C.C.C. \$81,212 C.D.C. \$157,397 C.W.C. \$238,609

11-04-96 T.P.-0 p.s.i. C.P.- 500 p.s.i. S.I. tubing @ 7:30 a.m. 3:00 p.m.- T.P.- 250 p.s.i. C.P.- 800 p.s.i. Take out choke. Try to un-load well. Would not flow. Left open to tank @ 4:30 p.m. On 24/64" choke.

D.C. \$95

C.C.C. \$81,307 C.D.C. \$157,397

C.W.C. \$238,704

11-05-96 T.P.- 0; C.P.- 825 p.s.i. P.U. Swab. F.L.- 1500'. Pull 2 swabs. Well flowing. Recovered 9 bbls. Water. 6 bbls. Over load. Flow to tank @ 8:00 a.m. on 18/64" choke. T.P.- 290 p.s.i. C.P.- 450 p.s.i. 9:00 a.m. T.P. 0. P.U. swab. Make 2 hrly. Swabs. Recovered 100' water on swab each hr. Small gas blow. Circ. Hole. TOOH. S.I.

D.C. \$1709

C.C.C. \$83,016 C.D.C. \$157,397

C.W.C. \$240,413

11-06-96 MIRU Schlumberger. Set CIBP @ 4200'. Pressure test to 3500 p.s.i. Perf. Wasatch- 3997'-4009', 12', 4 s.p.f. 3-1/2 37J charges. TIH. Land tubing. 128 jts. landed @ 3960'K.B. Break down with 2% KCL. Break @ 3400 p.s.i. Pump 1.5 b.p.m. @ 1600 p.s.i. ISDP- 1000 p.s.i.; 5 min.- 200 p.s.i.; 10 min.- 100 p.s.i.; 15 min.- 100 p.s.i. LTR- 62 bbls. Swab down. Recovered 61 bbls. Steady blow on tubing. C.P.- 100 p.s.i. Left open to tank on 18/64" choke.

D.C. \$6367

C.C.C. \$89,383 C.D.C. \$157,397

C.W.C. \$246,780

11-07-96 T.P.-0; C.P.- 100 p.s.i. PU swab. F.L.- 1600'. Swab down. Recovered 34 bbls. In 2.5 hrs. Last 3 swabs fluid level @ 3300'. Recovered 2 bbls. Each swab. Catch water sample. Circ. hole. Lay down 28 jts. TOOH. S.I.

D.C. \$1,461

C.C.C. \$90,844 C.D.C. \$157,397

C.W.C. \$248,241

11-08-96 T.P.-0; C.P..- 100 p.s.i. MIRU Schlumberger. Perf. 3134'-3140', 6', 4 s.p.f. 3-1/2, 37J charges. Perf. 3112'-3116', 4', 4 s.p.f. 3-1/2, 37J charges. P.U. 4-1/2" RBP and PKR. TIH. Set RBP @ 3168.66 KB. Set packer @ 3124.87' Pump down tubing. Pressure up to 2200 p.s.i. Casing started flowing. Pressured up on casing tubing started flowing. Set packer @ 3089' KB. Pressure test annulus to 2000 p.s.i. Held. Pump down tubing: 3 b.p.m. @ 2500 p.s.i. Pumped 6 bbls. ISDP- 1500 p.s.i. 5 min.- 1000 p.s.i. 10 min.- 500 p.s.i. 15 min.- 400 p.s.i. RU swab. Made 3 runs. Recovered 17 bbls. Light blow on tubing. Fourth swab recovered ½ bbl. Left tubing open to tank on 24/64" choke.

D.C. \$6858

C.C.C. \$97,527 C.D.C. \$157397

C.W.C. \$254,924

11-09-96 T.P.-0; RU swab. F.L.- 1000'.; Made 5 swab runs. Waited 1 hr. Swab. F.L.- 2600'. S.N. @ 3070'.; Rec. 1.9 bbls. On first run. 3.8 bbls. On second run. Water looks like it has drilling fines in it. Release packer. Set PKR below perfs. Test RBP. Pumped down tubing. Casing flowed. Reset PKR. Casing flowed. Retrieve RBP. Move RBP 4' down hole. Set PKR. Tested to 2000 p.s.i. Held. Isolate perfs @ 3134-3140' Pumped down casing into perfs @ 3112-3116'. Now flow up tubing. RU swab. Make 5 swab runs. Rec. 19 bbls. Well dry. Waited 45 min. Recovered ½ bbl. Make one more swab. Recovered ½ bbl. Left open to tank on 24/64" choke.

D.C. \$2878

C.C.C. \$100,405 C.D.C. \$157,397

C.W.C. \$257,802

11-10-96 Slight gas blow on tubing. P.U. swab. F.L.- 1200'. Swab down in 3 runs. Recovered 7.7 bbls. Make hrly. Swabs. Recovering 1 bbl. Per hr. Catch water sample. Left open to tank.

D.C. \$2156

C.C.C. \$102,561 C.D.C. \$157,397

C.W.C. \$259,958

11-11-96 Rig shut down for Sunday.

D.C. \$30

C.C.C. \$102,591 C.D.C. \$157,397

C.W.C. \$259,988

11-12-96 Trace of gas. Swab. F.L. 2100'. Made 2 swabs. Tubing dry. Wait 1 hr. Rec. ½ bbl. Wait 1 hr. Recovered ½ bbl. Release packer. Retreave RBP. TOOH. PU. 3-7/8" bit. TIH. Tag CIBP @ 4200'. PU power swivel. Drilling on CIBP.

D.C. \$4203

C.C.C. \$106,794 C.D.C. \$157,397

C.W.C. \$264,191

11-13-96 TOOH for bit change. PU new 3-7/8" bit. TIH. Drilled through CIBP @ 4200' @ 12:30 p.m. TIH. Drilling on CIBP @ 4270', Drilled 18". Quit making hole. TOOH. For bit inspection. One cone almost gone. Will PU new bit.

D.C. \$3067

C.C.C. \$109,861 C.D.C. \$157,397

C.W.C. \$267,258

11-14-96 PU new 3-7/8" bit. TIH. Circ. 3" of cuttings off CIBP. Drill 21" on CIBP. Bit quit
Drilling. TOOH. Most of the teeth were broken off. Will PU drag mill in A.M.
D.C. \$2546 C.C.C. \$112,407 C.D.C. \$157,397 C.W.C. \$269,804

11-15-96 PU 3-7/8" mill. TIH. Drill on CIBP for 40 min. Push down hole to 4500'. TOOH. Run tubing as follows. KB-12'; 134 jts. Tubing-4154.11'; AD-1 Packer-2.46'; 4 jts. Tubing-125.26'; S.N.-1.10'; 1 jt. Tubing- 30.80; knotched collar-.55; Tubing landed @ 4326.18 KB. Packer set @ 4168.57'. S.N. @ 4294.83'. Left open to tank.

Form 3140-5	UNITED	STATES	
(June 1990)	DEPARTMENT OF	F THE INTERIOR D MANAGEMENT	PORM APPROVED PARENT BARRIE No. 1604-0135 Experis: March 31, 1993
SUI	NDRY NOTICES AND	REPORTS ON WELLS	3. Land Designation and Serval No. UTU-75206
SO HOL GRA THIS ICHILL IS	or proposals to drill or	to deepen or reentry to a different res RMIT—" for such proposals	6. If Indian, Allows of Tribs Name
I. Type of West	SUBMIT IN	TRIPLICATE	7. If Unit or CA, Agreement Designation
	Other		
FREEDOM ENERGY,	INC.		R. Well Name and No. CENTER FORK F 17-4
3. Address and Telephone No.			9. API Well No. 43-047-32750
* LOCATION of West (Possesses, Sec.,	Ste. /IU, DENVE	R,CO. 80265 (303) 592-302	10. Field and Pool, or Exploratory Area
			WILDCAT
580'FWL,688'FNL	. NW/NW SEC.17.	T12S, R24E	11. County or Parish, State
CHECK APPE	OPRIATE BOYIS) TO	INDICATE MATING OF MATING	UINTAH COUNTY, UTAH
TYPE OF SUBM	ISSION	INDICATE NATURE OF NOTICE,	
Natice of Intent		TYPE OF A	CTION
[♥]		Abandonment Recompletion	Change of Plans  New Communication
Subsequent Repo	л 	Plugging Sock Casing Repair	Non-Rousian Fracturing
Fishi Abendonese	zna Hestica	Attering Caring	Water Shut-Off Conversion to Injection
		U 046	Dispose Water
13. Ocsaribe Proposed or Completed C	Operations (Clearly state all parties	20 details, and give persistent dates, including estimated date to for all smarkers and zones perdaged to this work to	(New: Report results of motifal completion on Well Completion or Recompletion Report and Log form.
		as details, and give persistent dears, including estimated date to for all nursions and comes persistent to this work.)*	my proposed water it well is suscinctally drill
Drilling Repor	r )		
		D E C	जिस्तारा ज
		D) EC	15, 11 V 15
		10/1	
		001	7 2 5 1995
		DIV. OF OIL	., GAS & MINING
			**************************************
14. I hereby certally that the foregoing	is the and correct		
Signed Paul Fran	. <b>\</b> .	Tobe Vice - President	10 01-01-
(This space for Federal or State of	Mes use)		Doc 10-21-96
Approved by Conditions of approval, if any:		Title	Date
-			

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully as make to any department or agency of the United States any Takes, fictitious or fraudulent statement or representations as to any makes within its jurisdiction.

#### ITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM	I APPR	OVED
gerfånt geti	min No.	1004-013
Experes	March	31, 1993
Lance Charles		

		Libert	March	31,	1993
3.	Lesse		-	<u> </u>	A No.

SUNDRY NOTICES AND REPORTS ON WELLS	UTU-75206
TOTICES AND REPORTS ON WELLS	010-73200

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use "APPLICATION FOR PERMIT-" for such proposals

SUBMIT IN TRIPLICATE

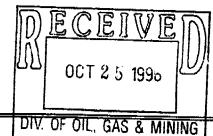
6. If Indian, Allogue or Tobe No

7. If Unit or CA, Agrees

ON Well Well Other  2. Name of Operator FREEDOM ENERGY, INC.  3. Address and Telephone No. 1050 17th. St. Ste. 710, DE 4. Location of Well (Footage, Sec., T., R., M., or Survey D	ENVER,CO. 80265 (303) 592-3022	8. Well Name and No.  CENTER FORK F 17-4  9. API Well No.  43-047-32750  10. Field and Pool, or Exploratory Area
580'FWL,688'FNL NW/NW SEC.	17, T12S, R24E  S) TO INDICATE NATURE OF NOTICE, REPO	
Notice of Intent  Subsequent Report  Final Abandonment Notice	Abandonment  Recompletion  Plugging Back  Casing Repair  Altering Casing  Other  Descriptions dates, including estimated date of starting depths for all markers and zones pertinent to this work.)	Change of Pians  New Construction  Non-Routine Fracturing  Water Shut-Off  Conversion to Injection  Dispose Water  (Note: Report results of multiple consultation on W.

COMPLETION PROCEDURE FOR MESAVERDE 4522' - 4528'

Clean location. Set anchors. MIRU Well Service Unit. Install B.O.P. P.U. 3 7/8" bit and scraper. P.U. and tally tubing in hole to P.B.T.D. TOOH. MIRU Schlumberger. Run CBL/VDL/GR from T.D. to surface. Perf. Mesaverde: 4522' - 4528', 6', 4 s.p.f., Total: 24 shots. P.U.S.N. and knotched collar. T.I.H. Land tubing @ 4500'. Break down formation with rig pump with 2% KCL. Swabbtest. If commercial rates of gas are encountered will release rig and hook up surface equipment.



		Accepted by the
Approved by Conditions of approval, if any:	Title	Date
(This space for Federal or State office use)		
Signed Stewn W. Shefte	Tide _Explo	DIV. OF OIL, GAS & MINING Oct. 22,1996
14. I hereby certify that the foregoing is true and confect		

Form 3160-5 (June 1990)

HCL IF NEEDED.

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM	APPR	OVED
Budget Bur	eau No.	1004-0134
_ Expires:	March	31, 1993

5. Losse Designation and Serial No.

6. If Indian, Allomes or Tribs Name

UTU-75206

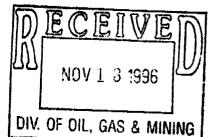
# SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.

Use "APPLICATION FOR PERMIT—" for such proposals.

	FERMIT— for such proposals	
I. Type of Well	IN TRIPLICATE	7. If Unit or CA, Agreement Designation
Oil Gas Other		8. Well Name and No.
2. Name of Operator FREEDOM ENERGY, INC.		CENTER FORK F 17-4
3. Address and Telephone No. 1050 17th. St. Ste. 710, DE	NVER,CO. 80265 (303) 592-3022	9. API Well No. 43-047-32750
4. Location of Well (Footage, Sec., T., R., M., or Survey Des		WILDCAT
580'FWL,688'FNL NW/NW SEC.	17,T12S,R24E	11. County or Parish, State
CHECK APPROPRIATE BOXIS	) TO INDICATE NATURE OF NOTICE, REPO	UINTAH COUNTY, UTAH
TYPE OF SUBMISSION	TYPE OF ACTION	
Notice of Intent	Abandonment	Change of Plans
Subsequent Report	Recompletion Plugging Back	New Construction Non-Routine Fracturing
Final Abandonment Notice	Casing Repair Altering Casing  Altering PERF & TEST MESA VI	Water Shut-Off Conversion to Injection
Describe Proposed or Completed Operations (Clearly state all r		(Note: Report results of multiple completion on We Completion or Recompletion Report and Log form
give subsurface locations and measured and true vertical	depths for all markers and zones pertinent to this work.)*	ng any proposed work. If well is directionally drill.
CIBP OVER PERFORATED INTERVALL PERF. AND TEST FOLLOWING NO 2-4302',10',4 S.P.F. 34-4240', 6', 4 S.P.F. 97-4009' 12', 4 S.P.F.		

WILL ISOLATE ZONES WITH RBP AND PACKER. WILL TREAT ZONES WITH 500 GAL. 7-1/2%



14 11		ME, GAO & WITHING
14. I hereby certify that the foregoing is true and correct Signed	Title Vice-President	Desc 11 - 8 - 9 6
(This space for Federal or State office use)		
Approved by Conditions of approval, if any:	Title	Date
<u> </u>		

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statement or representations as to any matter within its jurisdiction.

STATE OF UTAH DIVISION OF UIL, GAS AND MINING ENTITY ACTION FORM - FORM 6

OPERATOR FREEDOM ENERGY, INC. ADDRESS 1050 17TH ST. STE. 710 DENVER, CO. 80265

DIV. OF OIL, GAS & MINING

OPERATOR ACCT. NO.

Phone No. 1303 1 592-3022

43-047-32750 added 11-189.	center for	RK F 17-4	NWXW	sc WW17	12S	PRG 24E	COUNTY UINTAH	9-14-96	DATE  11-15-
43-047-32750 added 11-189	CENTER FOR	RK F 17-4	ижи	₩W17	12S	24E	UINTAH	9-14-96	11-15-
added 11-189.	6. Le			<u>1</u>	<u> </u>	<u>                                     </u>			
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(3/89)

D - Re-assign well from one existing entity to a new entity

NOTE: Use COMMENT section to explain why each Action Code was selected.

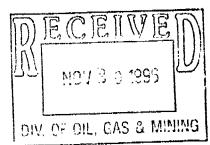
E - Other (explain in comments section)

Form 3160-5 (June 1990)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM	APTR	071	ED CE
Budget Burn	Ma.	lac	H-0135
Expires	March	31.	1993

BUREAU OF LAND MANAGEMENT 5. Lease Designation and Serial No. UTU-75206 SUNDRY NOTICES AND REPORTS ON WELLS 6. If Indian, Allowse or Tribe Name Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use "APPLICATION FOR PERMIT-" for such proposals 7. If Unit or CA, Agreement Designation SUBMIT IN TRIPLICATE 1. Type of Well Gas Weil 8. Well Name and No. 2. Name of Operator CENTER FORK F 17-4 FREEDOM ENERGY, INC. 9. API Well No. 3. Address and Telephone No. 43-047-32750 1050 17th. St. Ste. 710, DENVER, CO. 80265 (303) 592-3022 10. Field and Pool, or Exploratory Area 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) WILDCAT 11. County or Parish, State 580'FWL,688'FNL NW/NW SEC.17,T12S,R24E UINTAH COUNTY, UTAH CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA 12. TYPE OF SUBMISSION TYPE OF ACTION → Notice of Intent Abandonment Change of Plans Recompletion **New Construction** Subsequent Report Plugging Back Non-Routine Fracturing Casing Repair Water Shut-Off Final Abandonment Notice Altering Casing Conversion to Injection Other COMPLETION REPORT Dispose Water (Note: Report results of me Completion or Recompletion Report and Log form. 13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drille give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\* COMPLETION REPORT



I hereby certify that the foregoing is true and correct Signed	Tule VICE-PRESIDENT	11-18-96
This space for Federal or State office use)  Approved by	Title	Date
18 U.S.C. Section 1001, makes it a crime for any person knowpresentations as to any matter within its jurisdiction.	wingly and willfully to make to any department or agency of the	United States any false fictivious or foundulent

FORM 8

STATE OF UTAH

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	1.50		£.\$457	(3	<u>V</u>	<u> </u>		
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	DIVI	SION OF	OIL. GAS	AND M	HINGNO	4.3	) 1993		UTU-75		N AND SERIAL NO.
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L TYPE OF WEL	L: 91	t. C 4	i. []		Other	ite, Ui	10 a 11	11141141	DHIT AGE	TKIKI	F4M3
L TYPE OF COM									-		
	*****				Other				\$. FARM OR		
PREDOM		TNO	•				•		CENTER	FORK	<u>. F</u>
FREEDOM		INC.									
1050 17T		'E 710	DENVER	CO	80265				17-4	D 700L	OR WILDCAY
1. LOCATION OF WE	L. (Report local	ion clearly on	d in accordance	e with en	y State requir				MIIDCAT	,	
At serface 58	O' FNL-6	88' FW	L NW/NW	_		- A	171	ΛI	II. SEC. T.	L, M., CA	S-R24E SLM
At top prod. in:				つしゅ	(ICII)	-	VIII.	AI.	SFC 17-	т129	L_POAR SIM
		SAM	. ,	JUI	AI IN		4 # #	, <b>, ,</b>	000.17	1120	/-K246 566
At total depth	SAME					DATE I			12. COUNTY		
			14. A 43-	047–3	2750	5/3	28/96		UINTAH	ī	UTAH
13. 6475 4746049	16. DATE T.S.	REACHED   17									ST. CASIFFEEAD
9-14-96	10-17-	96	11-15-9	6 014	414.) 6	212	G.L	, 164, I	IT, 68, ETC./	4	4' K.B.
20. TOTAL PEPTE, MD							23. (MTE	EVALE	BOTART TOO	<u>i                                      </u>	CARLE TOOLS
4750' T	VD 45	00'K.B	.(CIBE)	NOM H	744	1	DEIL	- TE 622	0-4750'	1	·
24. PRODUCING INTE	IVAL(X), OF TEC	COMPLETION		. NAME (1						23.	TAS DESCRIONAL
(0001 (0		i <b>.</b>		_						1	
4292'-43			SA-VERD	E	•••						NO
CNL/DIL/	CD /CD /CM	EGN CDT	VDL/GR		96 " "	AS TELL		s (□ +0) <u>k</u>	<u> </u>		
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9-5/8"	40#		ll'G.L.	<u> </u>	-1/4"	1181	3 SKS			<del>  </del>	AMOUNT POLLED
4-1/2"	111.6#	t	739'K.B	,	-7/8"		5 SKS			<del></del>	0
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9.		LINER REC	ORD				30.	. 7	UBING RECO	RD	
SIZE	102 (MB)	NOTTON (N	B) 24CE3 C	RM ENT	SCHEEN (A)	0)	SIZZ		PEPTE BET (M	0) 1	PACEER SET (MD)
N/A							2-3/	8"	4326'		4168'
1. FERFORATION RE						1					
			er)		12.				URE, CEMEN		
4522-452 4292-430	8; CIBP@	4500'			4522-4				GAL. 7-		HCL
4234'-42					4322-	4020	,	200	GAL. /-	1/2/6	псь
3997-400											
3134-314			2-3116'	WASA	TCH				· · · · · · · · · · · · · · · · · · ·		
13.				PROI	DUCTION						
ATE FIRST PROBUCT	TOP PROC	NTTE KOTTON	on (Floreing, s	os lift, p	2117-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	end ty	pe of pum	#)	1 484	f.(m.)	(Producing or
AIT OF TEST	ROUGS TESTED		, , , , , , , , , , , , , , , , , , ,				GASMC			T-IN	
		1	1237	N. FGR PER100	011-061	1			WATER—CEL	1	AS-OIL RATIO
LI-1-11-	B 36HRS		/64"  <del>-</del>	406	GA3-	MCF.	550	MCF.	1.08BB		VITT-API (CDAR.)
110-210	550 <b>PS</b> I	24- # OC 2			550	O MC			BBLS	-	
4. DISPOSITION OF		r fuel, rented,	, eta.)		1 220	- 110	<u> 1.</u>	100	TEST WITHE	78 6381	
VENTED											
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LOGS ENC			TT 000	-							
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is. I hereby certify					lete and corr	PCT 46	determine	d (toes	ali Avzilable r	ecords	

# INSTRUCTIONS

this form should be completed in compliance with the Utah Oil and Gas Conservation General Rules. If not filed prior to this time, all logs, tests, and directional surveys as required by Utah Rules should be attached and submitted with this report.

and in item 24 show the producinginterval, or intervals, top(s), bottom(s) and name(s) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data ITEMS 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, ITEM 18: Indicate which elevation is used as reference for depth measurements given in other spaces on this form and on any attachments. pertinent to such interval.

ITEM 29: "Sacks Cement": Attached supplemental records for this well showld show the details of any multiple stage cementing and the location of

ITEM 33: Submit a separate completion report on this form for each interval to be separately produced (see instruction for items 22 and 24 above). the cementing tool.

37. SUIHHARY OF POROUS ZONES:	POROUS ZONES:			36	GEN AGTE MADEGO	
Show all is and all dr.	mportant zones 111-stem tests open, flowing	of porosity including displaying	Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem tests, including depth interval tasted, cushion used, time tool open, flowing and shut-in pressures, and recoveries,			•
Formation	Ĭap	Bottom	Description, contents, etc.	Name		90
Green River	Surface	24305	Interbedded shale, sandstone, and limestone		Mass. Depth	Depth True Vert Depth
Wasatch	2430'	3994 '	Interbedded shale and sandstone	Uteland B Butte	2334	
Mesaverde	3994'	4744'	Interbedded shale, sandstone,			
			Section 1.			
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						هرسین <sub>د</sub>



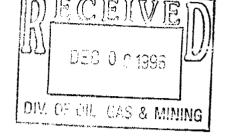
CONFIDENTIAL

December 3, 1996

State Division Oil, Gas & Mining 1594 W. N. Temple Suite 1210 Box 145801 Salt Lake City, Utah 84114

Attn: Kristen

Dear Kristen.



43-047-32750

Please keep the Freedom Energy Inc. Center Fork F #17-4 under Tight Hole status.

Freedom has also drilled three other wells which we would like to have placed under Tight Hole status.

They are:

Toby Federal F #6-15 43-047-32757
Hanging Rock F #7-6 43-047-32751
Hanging Rock I #12-4 43-047-32748

Sincerely,

Steve Shefte

CONFIDENTIAL

VR03W189

#### **BJ SERVICES COMPANY**

#### WATER ANALYSIS #VR03W189

#### **VERNAL LAB**

#### GENERAL INFORMATION

OPERATOR:

FREEDOM

DEPTH:

4292-4302

WELL:

CENTER FORK 17-4

DATE SAMPLED: 11/04/96

FIELD:

DATE RECEIVED:11/04/96

STATE: UT

WORKED BY : DAVE BURGER

SUBMITTED BY: PAUL FRANKS

COUNTY: UINTAH

FORMATION:

PHONE NUMBER: 801-781-2294

#### SAMPLE DESCRIPTION

CLOUDY WATER FILTERED TO CLEAR

#### PHYSICAL AND CHEMICAL DETERMINATIONS

SPECIFIC GRAVITY:

1.000

@ 72°F PH: 8.50

RESISTIVITY (MEASURED ): 10.000 ohms @ 72°F

IRON (FE++):

mqq 0

SULFATE:

0 ppm

CALCIUM:

60 ppm

TOTAL HARDNESS

200 ppm

MAGNESIUM:

12 ppm

BICARBONATE:

CHLORIDE:

3,172 ppm

SODIUM+POTASS:

2,000 ppm 4,074 ppm

SODIUM CHLORIDE(Calc) TOT. DISSOLVED SOLIDS: 3,289 ppm

IODINE:

POTASSIUM CHLORIDE: 100

9,446 ppm

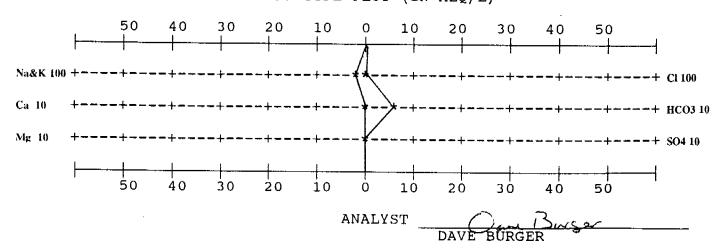
#### REMARKS

H2S NOT PRESENT

CARBOHYDRATES NOT DETERMINED

PRODUCING ZONE

#### STIFF TYPE PLOT (IN MEQ/L)



# **BJ SERVICES**

Water Analysis Worksheet

	water	Analysis Worksher	,
OPERAT FIELD: DEPTH: DATE SA COUNTY WORKE!	AMPLED: 4292-430 11/4/86 1: unlind	WELL NAME: FORMATION: SUBMITTED BY: DATE RECEIVED:	Paul trunks 1014/064
REMARKS:	·		0.5
	RAVITY: 1.000	TEMP.: 22.	pH: <u>-</u> <del>?</del> . <u> </u>
This program	requires that the molarity of EDT reness. This is in order to be able	A and the ML of sample be the same to calculate Magnesium.	
Michaelty of El	OTA: <u>6.01</u>		_(Used in Ca & Hardness)
NIL of EDTA	used in Calcium: 6.3	ML of EDTA used in	Hardness: <u>(6.40</u>
Resistivity:	OT (OHMS/METER)		
Chloride:	ML of Silver Nitrate: O.S.  Normality of AgNO3: O.S24	ML of Sample:	<u>5</u>
Bicarbs:	ML of HCI: 2.6 Normality of HCI: 0.10	ML of Sample:	
Sulfate:	Turbidimetric MethodMG/L		
Phosphate:	MG/L	Iron:MG/L	
Potassium:	100 MG/L	If K was not determined, do you so to be: Mainly Na (Y/N)? Mainly K (Y/N)? Half of Both?	uspect the ma <b>ter</b> ial
Carbohydrate	•		
	C. Dhambata Iron and Potass	ium if there is none detected enter '0'	on that field.

NOTE:

For Phosphate, Iron, and Potassium if there is none detected enter '0' on that field.

If it was Not Determined enter 'ND' on that field.

(970) 381 -0395

### **BJ SERVICES COMPANY**

#### **WATER ANALYSIS #VR03W188**

#### VERNAL LAB

#### GENERAL INFORMATION

OPERATOR:

FREEDOM ENGERY

DEPTH:

4522-4528

WELL:

CENTER FORK 17Y

DATE SAMPLED: 10/30/96

FIELD:

DATE RECEIVED:10/30/96

STATE: UT

SUBMITTED BY: PAUL FRANKS WORKED BY : TEX GIESE

COUNTY: UINTAH FORMATION: MESA VERDE

PHONE NUMBER: 970-381-0395

4522'-4528'

#### SAMPLE DESCRIPTION

CLOUDY DARK H2O FILTERED CLEAR

#### PHYSICAL AND CHEMICAL DETERMINATIONS

SPECIFIC GRAVITY:

1.005

@ 70°F PH:

7.00

RESISTIVITY (MEASURED ): 0.300 ohms @ 70°F

IRON (FE++): 25 ppm SULFATE:

80 ppm

CALCIUM:

259 ppm

TOTAL HARDNESS

1,493 ppm

MAGNESIUM:

206 ppm

BICARBONATE:

1,821 ppm

CHLORIDE:

5,969 ppm

SODIUM CHLORIDE(Calc)

9,819 ppm

SODIUM+POTASS:

6,634 ppm

TOT. DISSOLVED SOLIDS: 15,997 ppm

IODINE:

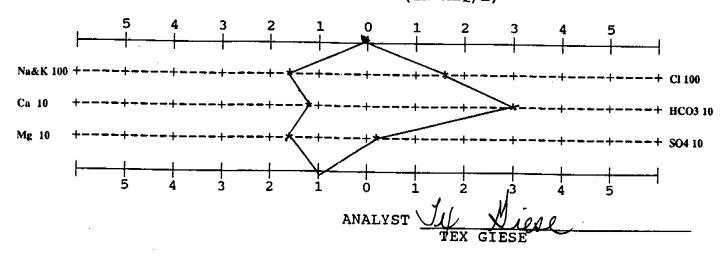
POTASSIUM CHLORIDE: 1500 1.2%

NO H2S PRESENT

INJECTION ZONE

#### STIFF TYPE PLOT (IN MEQ/L)

REMARKS



Form 1160-1 (June 1990)

# DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED Budget Bureau No. 1004-0135 Expires: March 31, 1993

J. Later Designation and Serial No. SUNDRY NOTICES AND REPORTS ON WELLS UTU-75206 Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. 6. If Indian, Allottes or Tribs Name Use "APPLICATION FOR PERMIT-" for such proposals 7. If Unit or CA, Agreement Designation SUBMIT IN TRIPLICATE I. Type of Well ☐ Well ☑ Gas 8. Well Name and No. 2. Name of Operator FREEDOM ENERGY, INC. CENTER FORK F 17-4 9. API Well No. 3. Address and Telephone No. 43-047-32750 1050 17th. St. Ste. 710, DENVER, CO. 80265 (303) 592-3022 10. Field and Pool, or Explorasory Area 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) WILDCAT 11. County or Parish, State 580'FWL,688'FNL NW/NW SEC.17,T12S,R24E UINTAH COUNTY, UTAH CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA TYPE OF SUBMISSION TYPE OF ACTION Motice of Intent Abandonment Change of Plans Recompletion New Construction Subsequent Report Plugging Back Non-Routine Fracturing Casing Repair Water Shut-Off Final Abendonment Notice Altering Casing Conversion to Injection Cher Install and test DHI Dispose Water tool. 13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drill give subsurface locations and measured and true vertical depths for all markers and zones performs to this work.)\*
FEI is requesting permission to test a Down Hole Injection Tool. (DHI) in this well. Water would be injected into a MesaVerde formation that tested wet from 4522-4528' on  $11-\bar{1}-96$ . A water sample is enclosed. The producing zone is a Mesa Verde formation from 4292'-4302'. This zone tested between 300 and 600 mcf with 108 bbls of water per day on 11-1-11-2-96. Wter sample enclosed. We will perf. 4528-4560', 4 s.p.f; 4566'-4604' 4 s.p.f. Break formations down with 1000 gal. 7-1/2% HCL. and perform a rate test. The DHI tool will be a second installed in the well with an Elder Lok-Set packer set @ 4500' isolating the producing zone from the injection zone. A check valve is run below the packer. Gas is produced up the annulus and water is injected into the lower formations o the down stroke of the pump. We also request permission to test gas to the pit for a period of 1 month to tes the well and the injection tool before laying line to our gathering system. Tool information, well diagram, water samples. 14. I hereby certify that the foregoing is true and correct Hand Franks (This space for Federal or State office use) Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the fraudulent/ stateme or representations as to any matter within its jurisdiction.

"See Instruction on Reverse Side

DIV. OF OIL, GAS & MINING

## ATTACHMENT TO COMPLETION REPORT MONUMENT STATE # 32-2-9-17CD SW NE SECTION 2, T9S, R17E UINTAH COUNTY, UTAH

DEPTH INTERVAL	AMOUNT AND KIND OF MATERIAL USED
4808'-4830'	Break down with 3,570 gallons 2% KCL water. Fracture with 36,000# 16/30 mesh sand 13,524 gallons 2% KCL gelled water.
4892'-4906'	Break down with 1,512 gallons 2% KCL water. Fracture with 36,000# 16/30 mesh sand 13,524 gallons 2% KCL gelled water.
5285'-5311'	Break down with 5,460 gallons 2% KCL water. Fracture with 16,800# 20/40 mesh sand and 42,900# 16/30 mesh sand 19,572 gallons 2% KCL gelled water.

#### DAILY OPERATING REPORT

BALCRON MONUMENT STATE #32-2-9-17CD

Location: SW NE Section 2, T9S, R17E

Uintah County, Utah --- TIGHT HOLE---

1648' FNL, 2282' FEL

PTD: 5850' Formation: Green River Prospect: Undesignated "

API #43-047-32737 Elevations: 5076.1'GL

Contractor:

Operator: EREC/Western Region

Spud: Casing:

#### Tubing:

09/16/96 TD: 278' (278') Day 1 Formation: Sundance

Present Operation: Nipple Up

MIRU Union Rig #17. Drill conductor & rat hole. Spud well @ 4:30 PM, 9/15/96. Drill 278' of 12-1/4" surface hole. Circulated hole clean. TOOH, ran 6 jts or 248.75' of 8-5/8", 24#, J-55, ST&C surface csg. Cemented w/160 sxs of Class "G" w/2% CaCl2 & 1/4#/sx Flocele. Csg set @ 258' w/insert float @ 216'. Plug down @ 12:30 AM 9/16/96

09/17/96 TD: 1286' (1008') Day 2

Present Operation: Drilling

NU BOP stack. Tested BOP stack to 2000 psi, OK. Tested csg to 1500 psi, OK. TIH. Drilled cement, drilled new hole. Rig service. Survey @ 580' - 1/2°. Drill. Survey @

1100' - 3/4°. Drill.

DC: \$14,701 CC: \$53,113

09/18/96 TD: 2720' (1434') Day 3

Present Operation: Drilling

Drill. Survey @ 1600' - 1°. Drill. Survey @ 2175' - 1 ½°. Drill. Survey @ 2675' - 1 ½°.

Drill.

DC: \$17,979 CC: \$71,092

09/19/96 TD: 3790' (1070') Day 4

Present Operation: Drilling

Drill. Rig service. Hole started loading up w/wtr. Loaded hole w/KCL wtr. TOOH, picked up bit & mud motor. TIH, wash & ream 35' of fill. Drill. Survey @ 3575' - 1°.

Drill.

DC: \$14,469 CC: \$85,561

09/20/96 TD: 4698' (908') Day 5

Present Operation: Drilling

Drill. Run survey @ 4000' - 2-1/2°. Drill. Run survey @ 4560' - 2-1/4°. Drill. Rig repair. Drill. Rig repair. Drill.

DC: \$13,076 CC: \$98,637

09/21/96 TD: 5558' (860') Day 6

Present Operation: Drilling

Drill. Rig service. Drill. Survey @ 5230', 2°. Drill.

DC: \$11,182 .. CC: \$109,819

09/22/96 TD: 5717\* (159') Day 7

Present Operation: ND BOPs

Drilled to 5686'. Mud motor locked up. Circulated hole clean. Layed down drill pipe and drill collars. RU loggers & logged. Loggers TD 5718'. Ran & cemented 5-1/2" csg as follows:

1 - Guide shoe .75' 1 - jt 15.5#, J-55, LTC 42.55' 1 - Float collar 1.00' 135 - jts 15.5#, J-55, LTC 5643.54' KB 10.00'

Cement w/lead: 150 sxs of Sugper "G" w/3% salt, 2% gel, 2#/sx Kol-seal, & ¼#/sx Cello Flake. Tail: 360 sxs of 50/50 poz w/2% gel, 2#/sx Kol-seal & ¼#/sx Cello Flake. Plug down @ 5:15 AM, 9/22/96, w/good returns. ND BOPs.

\*Found 31' error in tally board. Correct to proper depth.

DC: \$54,483 CC: \$164,302

09/23/96 TD: 5717' (0') Day 8

Present Operation: RD to move off.

Finished ND. Set slips. Cleaned mud tank. Rigged down. Rig released @ 9:15 AM

9/22/96.

DC: \$4,133 CC: \$168,435

10/01/96 Completion

Dress up location, set rig anchors, set rig pump & tanks. MIRU Cannon Well Service Rig #2. Tih w/4-3/4" bit, csg scrapper & 182 jts 2-7/8" tbg. Tag PBTD @ 5629' KB. Circulate hole clean w/140 bbls 2% KCL wtr. Press test csg & BOP to 1000 psi, OK.

TOOH w/tbg & tools. SWIFD.

DC: \$6,218 CC: \$174,653

10/02/96 Completion

RU Cutters Wire Line to run CBL & perf. Run CBL from 5616' KB to 1300' KB. Top of cement 1555' KB. Perf 5285' - 5286', 5288' - 5305', 5308' - 5311', 4SPF. RD Cutter. TIH w/TS RBP, retrieving tool, 2-3/8" x 4' sub, HD pkr, 2-7/8" SN & 172 jts 2-7/8" tbg. Set BP @ 5356' KB, EOT @ 5227' KB, pkr @ 5220' KB. RU BJ Services & break down 5285' - 5311' w/5460 gals 2% KCL break down fluid. ATP = 2000 psi, ATR = 5.2 bpm, ISIP = 1400 psi. Used 130 bbls wtr. Release pkr. TOOH w/tbg, pkr & retrieving tool. SWIFD.

10/03/96 Completion

RU BJ Services to frac 5285' - 5311'. Frac w/19,572 gals 2% KCL gelled wtr, 16,800 lbs 20/40 mesh sand & 42,900 lbs 16/30 mesh sand. ATP = 1700 psi, ATR = 31.0 bpm, ISIP = 2200 psi, 5 min = 1770 psi, 10 min = 1630 psi, 15 min = 1570 psi, 30 min = 1530 psi. Used 466 bbls wtr. Start forced closure flow back, .5 bbl per minute. Flow back 275 bbls wtr, trace of sand. TIH w/retrieving tool, 2-3/8" x 4' sub, HD pkr, SN & 170 jts tbg. Tag sand @ 5250' KB. Circulate down to BP @ 5356' KB. Set pkr @ 5220' KB. Made 11 swab runs. Recovered 57 bbls wtr, trace of sand. Fluid level 1550' last run. SWIFN.

DC: \$28,678

CC: \$211,680

10/04/96

Completion

Fluid level @ surface. Made 31 swab runs. Recovered 16 bbls oil, 137 bbls wtr, trace of sand & good gas. No sand last 7 runs. Oil 30% last 5 runs. Fluid level @ 2150' last 5 runs. Release pkr, tag sand @ 5340' KB. Circulate down to BP @ 5356' KB. Used 12 bbls wtr. Reset BP @ 4982' KB. TOOH w/tbg, pkr & retrieving tool. SWI until 10/07/96.

DC: \$1,958

CC: \$213,638

10/06/96

Completion

RU Cutter Wire Line & Perf: 4808' - 4813', 4 holes; 4815' - 4819', 3 holes; 4825' - 4830', 4 holes; 4892' - 4896', 3 holes; 4903' - 4906', 2 holes. RD Cutter. TIH w/retrieving tool, 2-3/8" x 4' sub, HD pkr, 2-7/8" SN & 158 jts 2-7/8" tbg. Retrieve BP. Reset BP @ 4856' KB, EOT @ 4790' KB, pkr @ 4783' KB. RU BJ Services & break down 4808' - 4830' w/3570 gals 2%, KCl wtr. ATP = 1220 psi, ATR = 3.1 bpm, ISIP = 1000 psi. Used 85 bbls wtr. Reset BP @ 4982' KB, EOT @ 4853', pkr 4856' KB. Break down 4892' - 4906' w/1512 gals 2% KCL wtr. ATP = 1875 psi, ATR = 3.2 bpm, ISIP = 1100 psi. Used 36 bbls wtr. RD BJ Services. TOOH w/tbg, pkr & retrieving tool. SWIFD. Flowed back 40 bbls wtr.

DC: \$4,243

10/08/96

Completion

RU BJ Services & frac 4808' - 4906' w/13,524 gals 2% KCL gelled wtr & 36,000 lbs 16/30 mesh sand. ATP = 2700 psi, ATR = 34.9 bpm, ISIP = ??, 5 min = 1610 psi, 10 min = 1560 psi, 15 min = 1510 psi. Used 322 bbls wtr. Screen out in 6# stg w/16,000# on formation.. 20,000# sand in csg. RD BJ Services. Bleed well down, flow back 75 bbls wtr. TIH w/retrieving tool, 2-3/8" x 4' sub, HD pkr, SN & 20 jts tbg. Tag sand @ 622' KB. Circulate down to BP @ 4982' KB. Set pkr @ 4783' KB. SWIFN. DC: \$28,219

10/09/96

Completion

Bleed well down. Flow back 15 bbls wtr. Made 34 swab runs. Recovered 13 bbls oil, 154 bbls wtr, good gas, 2% sand. Oil 20% last 4 runs. Fluid level @ 1900' last 3 runs. SWIFD.

DC: \$1,895

CC: \$247,995

10/10/96

Completion

Could not get swab down (heavy oil). Pump 10 bbls hot wtr down tbg. Made 30 swab runs. Recovered 36 bbls oil, 108 bbls wtr, good gas, trace sand. Oil 40% last 3 runs. No sand last 16 runs. Good gas last 18 runs. Fluid level 2700' last 3 runs. SWIFD. DC: \$2,533

10/11/96 Completion

Flush tbg w/15 bbls wtr. Release pkr, circulate w/60 bbls wtr to kill well. Had trouble getting pkr free. Tag sand @ 4960' KB. Circulate down to BP @ 4982' KB. Release BP. TOOH w/tbg, pkr & BP. TIH w/production string (tbg) as follows:

	<u>LENGTH</u>	<u>DEPTH KB</u>
1 - notched-pinned collar	.40'	5380.78
1 - jt 2-7/8", EUE, J-55, 8rd, 6.5#	30.03'	5380.38'
1 - perf sub 2-7/8" x 4'	4.20'	5350.35'
1 - SN 2-7/8"	1.10'	5346.15'
18 - jts 2-7/8" EUE J-55 8rd 6.5#	561.98'	5345.05'
1 - tbg anchor 2-7/8" x 5-1/2" (TRIC	CO) 2.75'	4783.07
154 - jts 2-7/8" EUE J-55 8rd 6.5#	4770.32'	4780.32'
KB	10.00'	

Set tbg anchor w/11" tension (12000#). ND BOP, ND 5-M well head, NU 3-M well head. Flange up well head. SWIFD.

CC: \$269,325

CC: \$275,865

DC: \$18,797

10/12/96 Completion

TIH w/production string (rods) as follows:

- 1 DHP, 2-1/2" x 1-1/2" x 16' RHAC w/sm plunger (TRICO #1197)
- 1 Pony 7/8" x 2' w/2-1/8" guide
- 1 K-bar 1-1/2" x 25'
- 1 Pony 7/8" x 2' w/2-1/2" guide
- 211 3/4" x 25' D Plain
- 1 Pony 3/4" x 8'
- 1 Pony 3/4" x 6'
- 1 Polish rod 1-1/4" x 22'

Press test tbg & DHP 1000 psi, ok. SWI. RDMO.

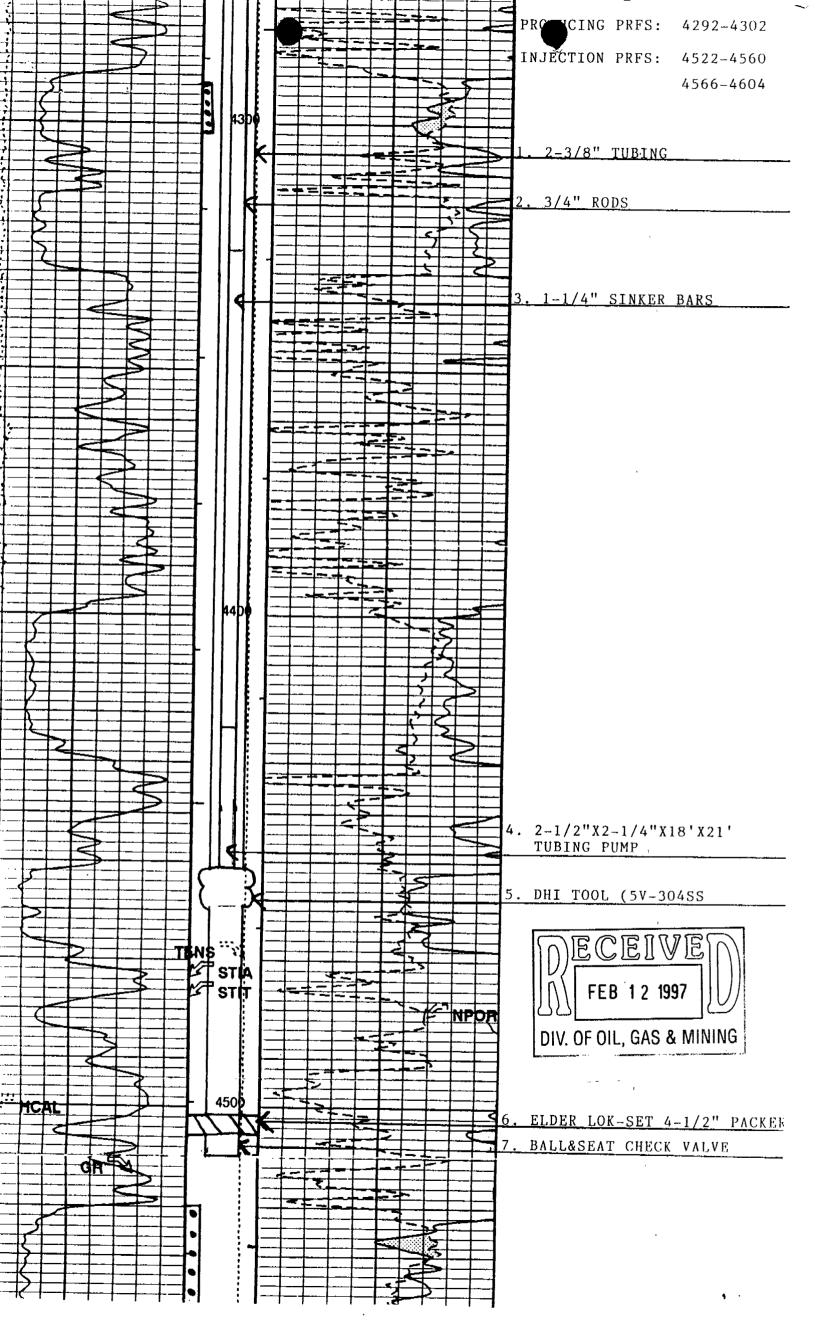
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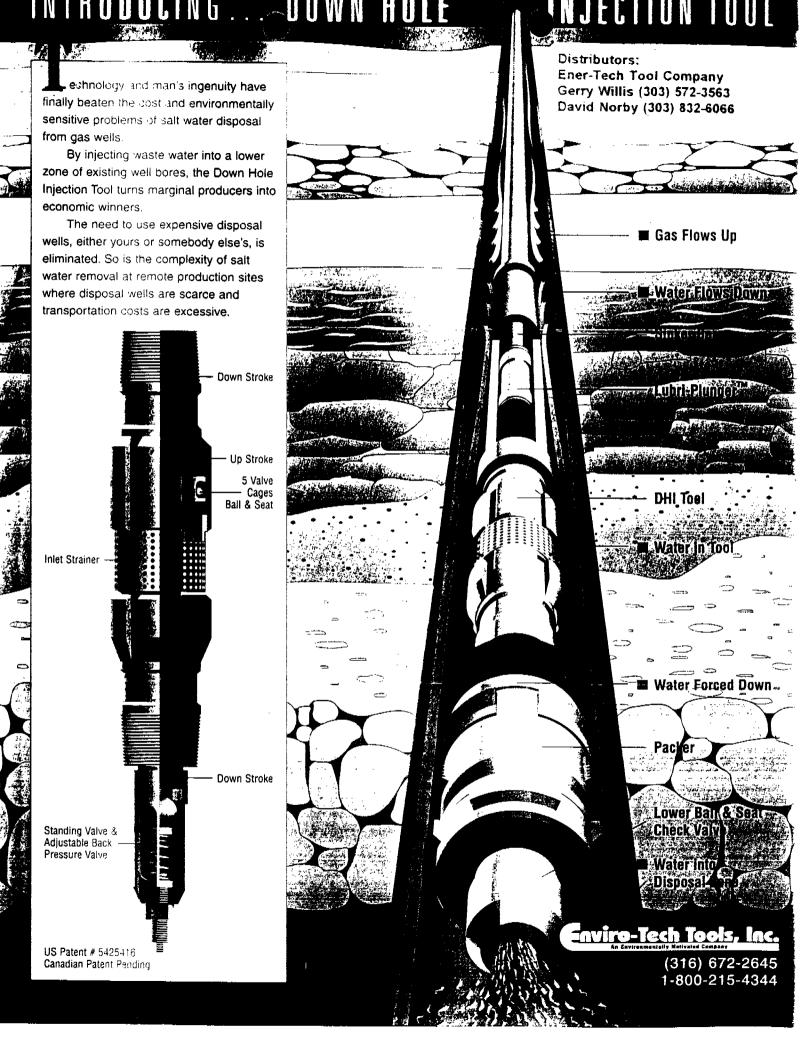
DC: \$6,540

10/22/96 Completion

Start well pumping @ \$:00 PM. 4-3/4 SPM, 88" stroke.

DC: \$13,189 CC: \$289,054





#### Rocky Mountain Distributors: Ener-Tech Associates, Inc. Gerry Willis (303) 572-3563 David Norby (303) 832-6066

# **New Tool Disposes Water Down Hole**

By Clarence Michael and Anne D. Brown

PRATT, KS.-Environmental regulations governing the disposal of salt water produced from gas wells have become an economic burden for oil and gas companies, and even more stringent regulations may loom on the horizon. The escalating cost of disposing salt water co-produced from gas and oil wells (usually hauled by trucks for considerable distances) eats away at profit margins.

In some cases, the cost of disposing coproduced waters can make commerciallyviable wells marginal or even uneconomical to produce. In most cases, drilling and equipping a separate disposal well is costprohibitive. Many wells are being shut in and scheduled for plugging as a direct result of water disposal costs. The bottom line is that countless dollars worth of production are lost, and many leases are never developed.

A new concurrent disposal-injection process allows a modified conventional downhole mechanical lift pump to displace, under pressure, large quantities of unwanted salt water down hole rather than up. The process pumps waste water into lower formations that are water-bearing, or that have sufficient porosity and permeability to accept waste water.

The technology allows operators to produce gas and dispose of water in the same well bore at the same time, eliminating water hauling and disposal well costs. Since waste water is never brought to the surface, concerns about contaminating fresh water resources and surface soil from fragile transport lines, leaks and over-flows from storage tanks are also eliminated.

Concurrent disposal-injection is not appropriate for all wells. Prospective wells require a porous or water-bearing formation below the production interval, and production casing should be set at a sufficient depth to cover the intended injection zone. However, the Oklahoma Conservation Commission has approved the method for use in one well to dispose water in an open hole without a liner. Both Oklahoma and Kansas are classifying this method as a Class II injection well, and as such they require underground injection control permits.

#### Test Wells

The prototype tool was run in October 1993 by American Warrior Inc. of Gar-

den City, Ks., in a Hugoton gas well located in Seward County, Ks. Before the tool and modified pump were installed in the well, it pumped 66 barrels of water by conventional means and flowed 102,666 cubic feet of gas a day from the casing. Casing pressure was approximately 100 pounds per square inch.

After installing the equipment, casing pressure was reduced to 50 psi line pressure, and an estimated 100 bbls of water a day was injected. An average gas sale of 136.29 Mcf/day was obtained over a 110-day test period, resulting in a net economic gain of nearly \$4,000 a month. Table 1 shows a comparison of data both before and after the pump and tool were installed. Kevin Wiles, American Warrior's production manager, says the technology

continues to work "fantastically well," relieving water disposal costs and environmental concerns while increasing production.

A used tension packer was run below the pump/tool assembly on the original installation. After eight months, the packer sheared and the tubing and pump assembly were pulled. The packer was replaced with a lock-set type with an on/off tool above. The working components of the pump and tool were inspected and showed no signs of wear.

National Oil Company, a sister company to American Warrior, installed the modified pump and tool in a well in Texas County, Ok., in February 1994. Before installing the equipment, production averaged 80 bbls of water and 220.459 Mcf

#### TABLE 1

#### **American Warrior Performance Data**

Company
American Warrior, Inc.
P.O. Box 399
Garden City, Ks. 67846

Well Name
Prater #1-26

Casing: 41/2" Rods: 3/4" Seward, Ks. Sec 26-32S 32W Tubing: 2 3/8"

Location

Rods: 3/4" Pump Size: 13/4"

Production: Chase Group (2606-2684)

Disposal Depth: Lansing/Kansas City (4668-78) (4694-4707)

The following rates were furnished by American Warrior from monthly sales reports. The tool was installed on Oct. 19, 1993, at 1:45 p.m. By the morning of Oct. 23, American Warrior was selling 186 Mcf/day.

#### **Before Installation**

The last three months of production is used as daily "before" production rates.

Date	MMcf/month	Water	Days	Mcf/day
8/93	2,916	66 bbi/day	31	94.064
9/93	2,630	66 bbl/day	26	101.153
10/93	2,462	66 bbl/day	21	117.238

Total MMcf of 8,008 over 78 days=102.7 Mcf/day

#### After installation

Date	MMcf/month	Water	Days	Mcf/day
1/93	3,457	0	<b>2</b> 6	132.9611
2/93	4,055	0	31	130.8060
1/94	3,593	0	25	143.7200
2/94	3,887	0	28	138.810

Total MMcf of 14,992 over 110 days=136.3 Mcf/day

Estimated Annual Gross Gain

## Monthly and Annual Gross Income Gain

	(Before taxes and operations)	
Before:	102.7 Mcf/day x \$1.75 x 30.5 days Water disposal cost	\$5,479 -2,013
	Monthly gross income	\$3,466
After:	136.3 Mcf/day x \$1.75 x 30.5 days Water disposal cost	\$7,274 - 0
	Monthly gross income	\$7,274
Monthly Gro	ess Gain	\$3.808

\$45.696

Production is from the Upper Markow sand, and water is now being injuried in open hole into the Lower Morrow sand. When the annulus water was pumped down, gas flow taken from gauge reports averaged 343 Mcf/day, and approximately 220 barrels of water were pumped into the injection zone.

As shown in Table 2, National Oil's net economic gain since installing the pump/tool assembly on the well is \$9,000 a month, and daily production increased an average of 123 Mcf/day.

The test wells both produce from for-

mations in the upper sections of gas/water formations, and it would appear that the water table could only be lowered do to the base of the perforated interval. A strong possibility exists that if the production zones were perforated at their base, the water table might be lowered down to that level. If these results could be obtained from zone/base perforations, it would seem logical that additional flow rates could be obtained, along with additional recoverable reserves which would be economically produced.

Support your local association.

Pump size: 13/4"

#### TABLE 2

#### **National Oil Company Performance Data**

Company
National Oil Co.
Garden City, Ks. 67846

Casing: 41/2"

Well Name
Jackson #1
(Gas Well)

Casing: 23/8"

Location
Texas County, Ok.
6-3N-15E

Tubing: 23/8"

Production depth: Upper Morrow (6120-26) Disposal depth: Lower Morrow (6215-40)

The following production data was supplied by National Oil Co. from the pumper's (Delbert Smith) daily gauge reports. The tool was operational on Feb. 25, 1994, at 4:30 p.m.

#### **Before Installation**

Date	MMcf/month	Water	Mcf/day
10/93	6,854	80 bbl/day	221.096
11/93	4,907	80 bbl/day	163.366
12/93	6,594	80 bbl/day	212.064

Total MMcf of 18,355 over 92 days=199.5 Mcf/day

Rods: 3/4"

"Before" production rates are taken from the 10th and 12th months only: Total MMcf of 13,448 over 61 days=220 Mcf/day

#### After Installation Mcf/day Date Water Mcf/day **Date** Water 2/26 25 3/12 0 0 313 2/27 0 150 3/13 0 313\* 0 2/28 200 3/14 0 313\* 0 3/01 210 3/15 0 313\* 0 3/02 3/16 (down) 200 0 313° 3/03 0 (down) 271 3/17 ٥ 313\* 3/04 0 (down) 244 3/18 0 313\* 0 3/05 (down) 249 3/19 0 318 3/06 0 327 3/20 0 309 Ö 3/07 0 345 3/21 (down) 140 0 3/08 (down) 232 3/22 0 335 Õ 3/09 302 3/23 0 343 3/10 0 351 3/24 351 0 3/11

Note: For much of this period, the pumper was not using a sufficiently fast stroke to utilize the tool optimally. This problem was corrected on 3/21. Therefore, for purposes of these calculations, the average of the last three days is used.

Total MMcf of 1029 over 3 days=343 Mcf/day

## Monthly and Annual Gross Income Gain (Before taxes and operations)

Before:	220 Mcf/day x \$1.75 x 30.5 days	\$11,742
	Water disposal cost	-2,440
	Monthly gross income	\$ 9,302
After:	343 Mcf/day x \$1.75 x 30.5 days Water disposal cost	\$18,307 - 0
	Monthly gross income	\$18,307
Monthly Gro Estimated A	oss Gain: Annual Gross Gain:	\$9,002 \$108,060

Uses Existing Equipment

Existing standard equipment is utilized in the disposal method. An insert or tubing pump is modified and run in conjunction with the tool assembly, which simply causes fluid to be pumped down rather than up. The valves are removed from the plunger, and a bull plug is installed at its base. Valves are positioned in the annulus area between the tool and casing. An adjustable back-pressure valve is connected at the base of the tool and becomes its standing valve.

The back-pressure valve is preset to open at a pressure slightly greater than casing pressure, so if fluid were pumped off, gas would not "U-tube" through the tool into low-pressure injection zones.

It is recommended that a lock-set packer with an on/off tool be used to isolate production formations from injection zones. A spring-loaded snubber cage is installed at the base of the packer to permit tubing and tool assembly to be removed for servicing, and to prevent injection zone fluid from kicking up through casing.

The tool is constructed of 304-stainless steel, including valve cages, springs and back-pressure valve (Figure 1). Carbide seats are recommended. Design simplicity and the use of standard working parts make it easily serviced in the field.

The force required to pump down into disposal zones does not rely on either gas pressure or casing gravitational forces. The pump barrel simply loads on the upstroke of the pumping unit, and the weight of the tubing fluid and sucker rods provide the force to push the plunger down, creating a positive mechanical displacement. The power required to drive the pumping unit is not relative to the amount of water injected because tubing fluid and rod weight never changewhether 50 barrels or 500 barrels are pumped.

It is a good idea to use a water/polymer mix with the proper corrosion inhibitor as tubing fluid. Because the plunger will have some slippage of fluid necessary for lubrication, a small tank can be placed close to the well head and connected to a flow tee. Fluid gravitates into the tubing as needed, and the tank receives water displaced on the upstroke.

When pumping/disposal begins, it is important to monitor back-side fluid as it is being lowered. When fluid is pumped off, the design of the pump/tool allows it to compress gas into injection zones. Because no gas can get by the plunger or back-pressure (standing) valve, the pump design eliminates gas locking.

 A number of methods may be used to monitor the desired fluid level above the pump, including echo-meters, dynamometers, gas flow charts or simply watching

<sup>\*</sup> Pumper averaged from 3/12-3/18

for fluid pounds. A variable-speed motor is recommended in order to maintain the correct strokes needed per minute without changing sheaves. The design of the pump/tool allows a considerable amount of sand to be pumped since sand cannot get on top of the plunger.

#### Oil Production

To use the disposal method for oil production, casing needs to be of a size that allows two strings of tubing to be used. Two pumping units are required: one to dispose of water and a second, smaller unit to pump oil to the surface. The oil string should be set at a sufficient depth to skim oil separated from water. Ideally, two-three percent of water should be pumped to surface to assure operators that all available oil has been removed, simply increasing or decreasing pumping



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unit strokes to maintain separation control.

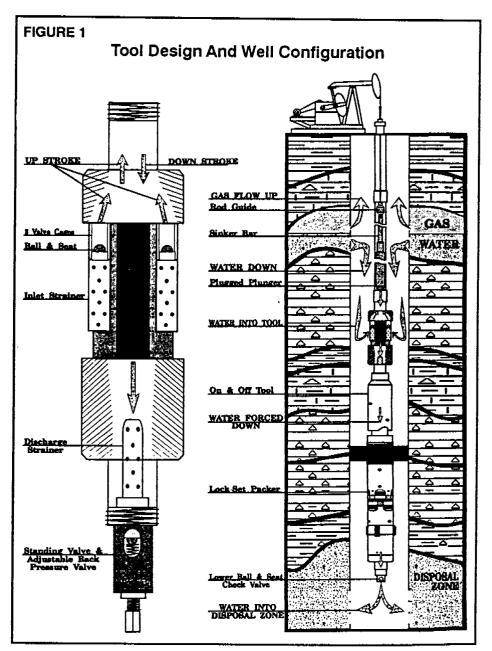
Water flooding of gas-drive oil pools can be accomplished with the pump/tool design. After selecting a pumping well to be used as the injection well, a known, compatible water-bearing formation above is perforated and the packer is positioned between the source water and the producing formation. By using this method, an existing well becomes the water source and existing equipment become the pump/pressure system.

This water disposal method should prolong the life of lifting equipment and downhole tubular goods. It is estimated that lifting load requirements are approximately 25 percent less by lifting and lowering tubing fluid columns rather than pumping fluid through surface lines and up into tanks. The corrosion of the inside diameter of tubing and sucker rods is

tually eliminated by the ability to mainn a constant sufficient water/inhibitor mixture, and adding friction-reducing agents to the mixture reduces wear.

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Water volumes of 400-600 bbls/day can be obtained in 4.5-inch casing, and 800-1,200 bbls/day is possible in 5.5-inch casing. Special-order pump tools can be built to pump larger amounts, but long-stroke pumping units should be used on all applications. Injection pressures of 1,000-1,200 psi per thousand feet of well



## Special Report invironmental Trends & Technology



depth may be obtained without requiring weighted rod and strings. A minimum of two sinker bars is recommended directly above the pump, with rod guides for stabilization, to reduce plunger wear.

Simultaneously producing gas while disposing of water by positive mechani-

cal displacement in the same well bore offers many desirable features for both short- and long-term environmental and economic benefits. They include:

 Preventing contamination of fresh water resources and surface soil;

• Eliminating water disposal hauling

expenses;

• Restoring non-economic and marginal wells back to production;

Maximizing profitability;

Encouraging future exploration;

• Removing environmental problems associated with water disposal.

· Farm 1160-5 (June 1990)

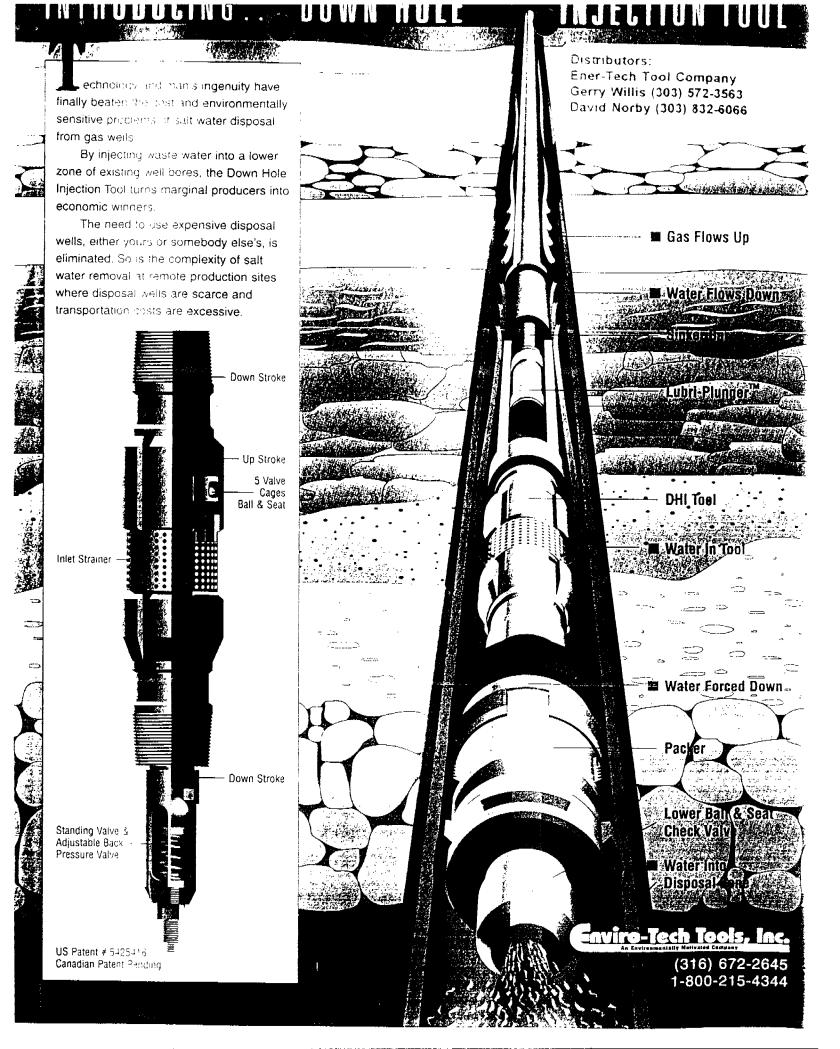
## TITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FO	RM APPR	OVED
Budget !	Bureeu No.	1004-0111
Exper	TE MARCH	31, 7993

## UTU-75206

SUNDRY NOTICES AND REPORTS ON WELLS

Use "APPLICATION FO	rill or to deepen or reentry to a different reservoi R PERMIT—" for such proposals	o. If indian, Allocton or Tribe Name
	TIN TRIPLICATE	7. If Unit or CA, Agreement Designation
I. Type of Well Oil S Gas Well Other		<del></del>
2. Name of Operator	•	8. Well Name and No.
FREEDOM ENERGY, INC.		CENTER FORK F 17-4
J. Address and Telephone No.		9. API Well No.
1050 17th. St. Ste. 710,DI	ENVER, CO. 80265 (303) 592-3022	43-047-32750
Location of Well (Footage, Sec., T., R., M., or Survey D	escription)	10. Field and Pool, or Exploratory Area WILDCAT
5001500 (001500		11. Councy or Parish, State
580'FWL,688'FNL NW/NW SEC.	.17,T12S,R24E	··· comey or raisin, squa
CHECK APPROPRIATE TOWN		UINTAH COUNTY, UTAH
CHECK APPROPRIATE BOX	s) TO INDICATE NATURE OF NOTICE, REPO	ORT, OR OTHER DATA
TYPE OF SUBMISSION	TYPE OF ACTIO	
Notice of Intent	Abandonment	
	Recompletion	Change of Plans
Subsequent Report	Plugging Back	New Construction Non-Routing Fracturing
Final Abandonment Notice	Casing Repair	Water Shut-Off
— Final Adendonment Notice	Altering Casing	Conversion to Injurios
	X Your Install and test tool.	DH I Dispose Water
Describe Proposed or Completed Operations (Clearly state at		(Note: Report results of multiple completion on W Completion or Recompletion Report and Log form
FEI is requesting permission vell.	pertinent densils, and give pertinent dates, including estimated date of start all depths for all markers and zones pertinent to this work.)* on to test a Down Hole Injection	Tool. (DHI) in this
1922-4926 on 11-1-96. A w Mesa Verde formation from 4	to a MesaVerde formation that test tater sample is enclosed. The pr 292'-4302'. This zone tested be day on 11-1-11-2-96. Wter sampl	oducing zone is a otween 300 and 600 mcf
installed in the well with	s.p.f; 4566'-4604' 4 s.p.f. Br and perform a rate test. The DH an Elder Lok-Set packer set @ 45 ection zone. A check valve is r	II tool will be then
Gas is produced up the annu the down stroke of the pump	lus and water is injected into t	he lower formations o
ne well and the injection	to test gas to the pit for a per tool before laying line to our g well diagram, water samples.	iod of 1 month to tes athering system.
Signed Paul Frank	Tile Vice President	
	PROVED BY THE STATE	Date 2-8-97
/ NI 1	FUTAL DIVISION OF	
Conditions of approval, if any:	L. GAS, AND MINING	ECEIVEIN-
DA	TE: 2-19-87	/
tle 18 U.S.C. Section 1001, makes it a crime for any		FEB.1 2 1997
representations as to any matter within its jurisdiction.	Or agency of the United	Sares any false, fictitious or fraudulent stateme





Rocky Mountain Distributors: Ener-Tech Associates, Inc. Gerry Willis (303) 572-3563 David Norby (303) 832-6066

# New Tool Disposes Water Down Hole

By Clarence Michael and Anne D. Brown

PRATT, KS.—Environmental regulations governing the disposal of salt water produced from gas wells have become an economic burden for oil and gas companies, and even more stringent regulations may loom on the horizon. The escalating cost of disposing salt water co-produced from gas and oil wells (usually hauled by trucks for considerable distances) eats away at profit margins.

In some cases, the cost of disposing coproduced waters can make commerciallyviable wells marginal or even uneconomical to produce. In most cases, drilling and equipping a separate disposal well is costprohibitive. Many wells are being shut in and scheduled for plugging as a direct result of water disposal costs. The bottom line is that countless dollars worth of production are lost, and many leases are never developed.

A new concurrent disposal-injection process allows a modified conventional downhole mechanical lift pump to displace, under pressure, large quantities of unwanted salt water down hole rather than up. The process pumps waste water into lower formations that are water-bearing, or that have sufficient porosity and permeability to accept waste water.

The technology allows operators to produce gas and dispose of water in the same well bore at the same time, eliminating water hauling and disposal well costs. Since waste water is never brought to the surface, concerns about contaminating fresh water resources and surface soil from fragile transport lines, leaks and over-flows from storage tanks are also eliminated.

Concurrent disposal-injection is not appropriate for all wells. Prospective wells require a porous or water-bearing formation below the production interval, and production casing should be set at a sufficient depth to cover the intended injection zone. However, the Oklahoma Conservation Commission has approved the method for use in one well to dispose water in an open hole without a liner. Both Oklahoma and Kansas are classifying this method as a Class II injection well, and as such they require underground injection control permits.

#### **Test Wells**

The prototype tool was run in October 1993 by American Warrior Inc. of Gar-

den City, Ks., in a Hugoton gas well located in Seward County, Ks. Before the tool and modified pump were installed in the well, it pumped 66 barrels of water by conventional means and flowed 102,666 cubic feet of gas a day from the casing. Casing pressure was approximately 100 pounds per square inch.

After installing the equipment, casing pressure was reduced to 50 psi line pressure, and an estimated 100 bbls of water a day was injected. An average gas sale of 136.29 Mcf/day was obtained over a 110-day test period, resulting in a net economic gain of nearly \$4,000 a month. Table 1 shows a comparison of data both before and after the pump and tool were installed. Kevin Wiles, American Warrior's production manager, says the technology

continues to work "fantastically well," relieving water disposal costs and environmental concerns while increasing production.

A used tension packer was run below the pump/tool assembly on the original installation. After eight months, the packer sheared and the tubing and pump assembly were pulled. The packer was replaced with a lock-set type with an on/off tool above. The working components of the pump and tool were inspected and showed no signs of wear.

National Oil Company, a sister company to American Warrior, installed the modified pump and tool in a well in Texas County, Ok., in February 1994. Before installing the equipment, production averaged 80 bbls of water and 220.459 Mcf

Location

Seward, Ks.

Sec 26-32S 32W

#### TABLE 1

### **American Warrior Performance Data**

Company	Well Name
American Warrior, Inc.	Prater #1-26
P.O. Box 399	
Garden City Vo. 67046	

Casing: 4<sup>1</sup>/<sub>2</sub>" Tubing: 2 <sup>3</sup>/<sub>6</sub>" Rods: <sup>3</sup>/<sub>4</sub>" Pump Size: 1<sup>3</sup>/<sub>4</sub>"

Production: Chase Group (2606-2684) Disposal Depth: Lansing/Kansas City (4668-78) (4694-4707)

The following rates were furnished by American Warrior from monthly sales reports. The tool was installed on Oct. 19, 1993, at 1:45 p.m. By the morning of Oct. 23, American Warrior was selling 186 Mcf/day.

#### Before Installation

The last three months of production is used as daily "before" production rates.

Date	MMcf/month	Water	Days	Mcf/day
8/93	2.916	66 bbl/day	31	94.064
9/93				94.004
	2,630	66 bbl/day	26	101.153
10/93	2,462	66 bbl/day	21	117.238
Total MMA	of of 9 000 over 70 day	- 100 7 14-4/3-		

Total MMcf of 8,008 over 78 days=102.7 Mcf/day

#### After Installation

Date	MMct/month	Water	Days	Mcf/dav
1/93	3,457	0	26	132.9611
2/93	4.055	ŏ		
1/94	3,593	0	31	130.8060
2/94	• • -	Ŭ	25	143.7200
4/94	3,887	Q	28	138.810

Total MMcf of 14,992 over 110 days=136.3 Mcf/day

## Monthly and Annual Gross Income Gain (Refore taxes and operations)

	(Before taxes and operations)	
Before:	102.7 Mcf/day x \$1.75 x 30.5 days Water disposal cost	\$5,479 -2,013
	Monthly gross income	\$3,466
After:	136.3 Mcf/day x \$1.75 x 30.5 days Water disposal cost	\$7,274 - 0
	Monthly gross income	\$7,274
Monthly Gro Estimated A	ss Gain nnual Gross Gain	\$3,808 \$45,696

for tluid pounds. A variable-speed main recommended in order to maintain correct strokes needed per minute without changing sheaves. The design of the pump/ tool allows a considerable amount of sand to be pumped since sand cannot get on top of the plunger.

#### Oil Production

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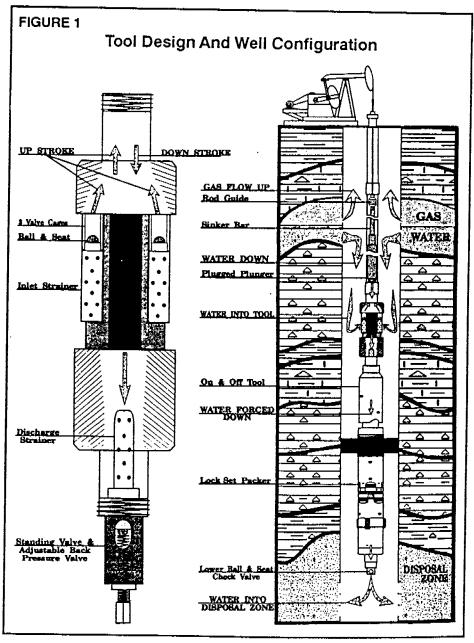
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VR03W189

## **BJ SERVICES COMPANY**

#### WATER ANALYSIS #VR03W189

#### VERNAL LAB

#### GENERAL INFORMATION

OPERATOR:

FREEDOM

DEPTH:

4292-4302

WELL:

CENTER FORK 17-4

DATE SAMPLED: 11/04/96

FIELD:

DATE RECEIVED:11/04/96 COUNTY: UINTAH

STATE: UT

WORKED BY

SUBMITTED BY: PAUL FRANKS :DAVE BURGER

FORMATION:

PHONE NUMBER: 801-781-2294

SAMPLE DESCRIPTION

CLOUDY WATER FILTERED TO CLEAR

### PHYSICAL AND CHEMICAL DETERMINATIONS

SPECIFIC GRAVITY:

1.000

@ 72°F PH:

RESISTIVITY (MEASURED ): 10.000 ohms @ 72°F

IRON (FE++):

0 ppm

SULFATE:

mqq 0

CALCIUM:

60 ppm

200 ppm

MAGNESIUM:

TOTAL HARDNESS

3,172 ppm

CHLORIDE:

12 ppm 2,000 ppm BICARBONATE:

3,289 ppm

SODIUM+POTASS:

4,074 ppm

SODIUM CHLORIDE(Calc) TOT. DISSOLVED SOLIDS:

IODINE:

POTASSIUM CHLORIDE: 100

9,446 ppm

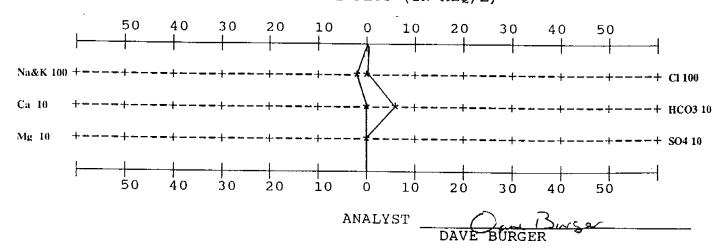
#### REMARKS

H2S NOT PRESENT

CARBOHYDRATES NOT DETERMINED

PRODUCING ZONE

### STIFF TYPE PLOT (IN MEQ/L)



## **BJ SERVICES**

Water Analysis Worksheet

	vvater	Allalysis Wolksher	, ·
COUNTY	AMPLED: 11/4/26 (: cuntry) D BY: pre 13/4	SUBMITTED BY: DATE RECEIVED: STATE:	Paul trunks 1014/1064
SAMPLF, DE	ESCRIPTION: Charly Wa	the followed to the	40
REMARKS:			
	RAVITY: 1.000	TEMP.: 22.	pH: <u>8.5</u>
This program and Yotal Fia	requires that the molarity of EDT. rdness. This is in order to be able		
Micharity of El	OTA: <u>6.01</u>	ML of Sample:	(Used in Ca & Hardness)
NIL of EDTA	used in Calcium: <u>6.3</u>	ML of EDYA used in	Hardness: <u>6.40</u>
Resistivity: Chloride:	ML of Silver Nitrate: 0.5 Normality of AgNO3: 0.524	ML of Sample:	5
Bicarbs:	ML of HCI: 2.6 Normality of HCI: 0.10	ML of Sample:	<u></u>
Sulfate:	Turbidimetric MethodMG/L		
Phosphate:	MG/L	Iron:MG/L	
Potassium:	100 MG/L	If K was not determined, do you su to be:  Mainly Na (Y/N)?  Mainly K (Y/N)?  Half of Both?	spect the ma <b>te</b> rial
Carbohydrate	es: <u>JO</u> PPTG		

NOTE:

For Phosphate, Iron, and Potassium if there is none detected enter '0' on that field.

If it was Not Determined enter 'ND' on that field.

(970) 381 -0395

## BJ SERVICES COMPANY

### WATER ANALYSIS #VR03W188

#### VERNAL LAB

## GENERAL INFORMATION

OPERATOR:

FREEDOM ENGERY

WELL:

CENTER FORK 17Y

FIELD: SUBMITTED BY: PAUL FRANKS

WORKED BY : TEX GIESE

PHONE NUMBER: 970-381-0395

DEPTH:

4522-4528

DATE SAMPLED: 10/30/96

DATE RECEIVED:10/30/96

COUNTY: UINTAH

STATE: UT

٠٦.

FORMATION: MESA VERDE

4522'-4528' Int. Fore

#### SAMPLE DESCRIPTION

CLOUDY DARK H20 FILTERED CLEAR

## PHYSICAL AND CHEMICAL DETERMINATIONS

SPECIFIC GRAVITY:

1.005

@ 70°F PH:

RESISTIVITY (MEASURED ): 0.300 ohms @ 70°F

IRON (FE++) : 25 ppm

SULFATE:

80 ppm

CALCIUM:

259 ppm

MAGNESIUM:

206 ppm

TOTAL HARDNESS

1,493 ppm

CHLORIDE:

5,969 ppm

1,821 ppm

SODIUM+POTASS:

6,634 ppm

TOTAL HARDINE BICARBONATE: CHLORIDE SODIUM CHLORIDE(Calc) 9,819 ppm TOT. DISSOLVED SOLIDS: 15,997 ppm

IODINE:

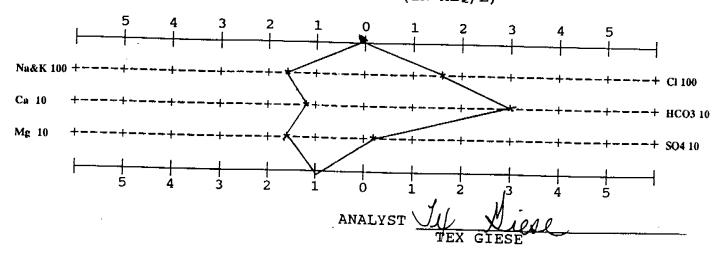
POTASSIUM CHLORIDE: 1500 1.2%

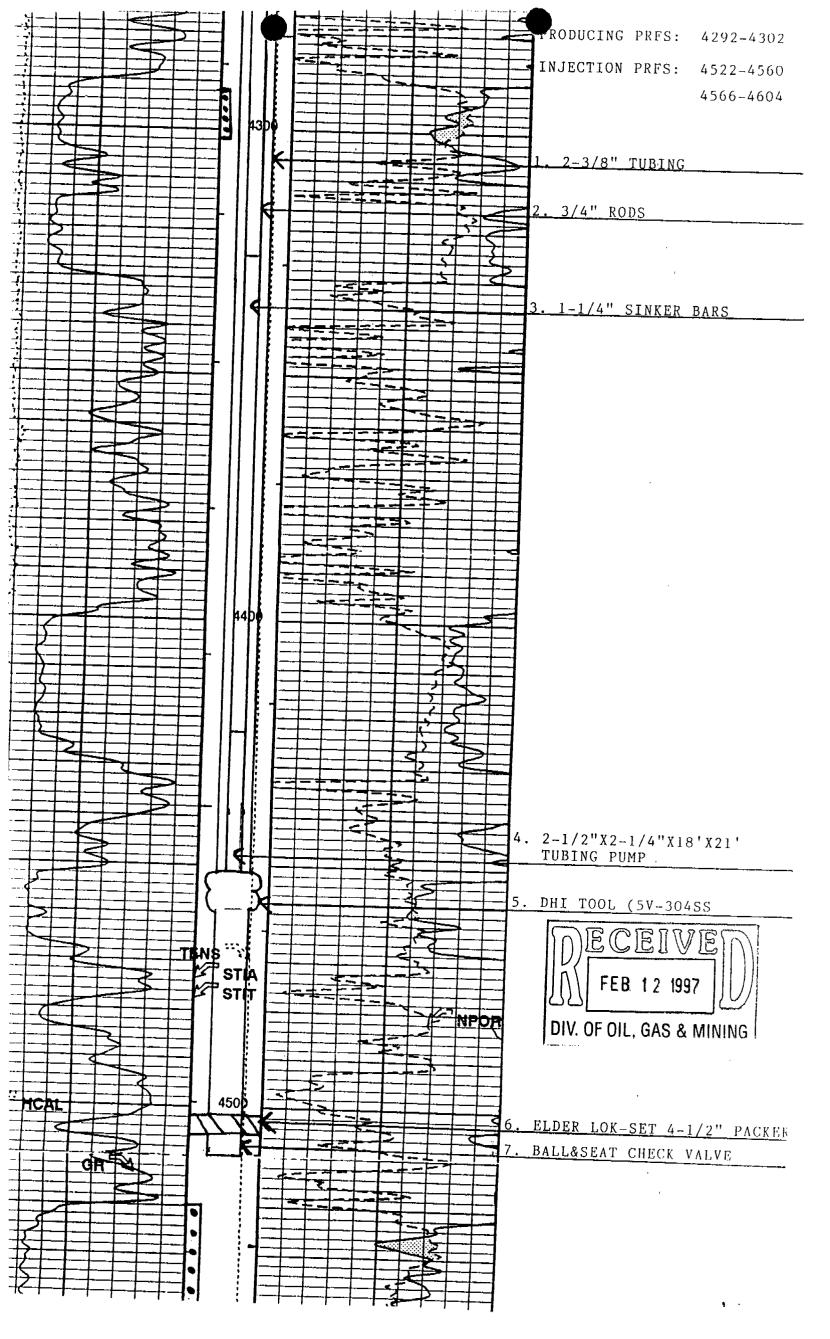
NO H2S PRESENT

INJECTION ZONE

## STIFF TYPE PLOT (IN MEQ/L)

REMARKS





Michael O. Leavitt Governor Ted Stewart Executive Director James W. Carter | 801-359-3940 (Fax) Division Director | 801-538-7223 (TDD)

1594 West North Temple, Suite 1210 Box 145801 Salt Lake City, Utah 84114-5801 801-538-5340 801-359-3940 (Fax)

February 19, 1997

Freedom Energy, Incorporated 1050 17th Street, Suite 710 Denver, Colorado 80265

Re: Down Hole Injection Test and Gas Flaring, Center Fort F 17-4 Well, Sec. 17, T. 12 S., R. 24 E., Uintah County, Utah

#### Gentlemen:

The Division has reviewed your application to test the subject well utilizing a down hole arrangement for transferring water to another zone and producing gas to the pit. accordance with the Oil and Gas Conservation General Rules, Utah Adm. Code R649-3-19, Well Testing and R649-3-20, Gas Flaring or Venting, your application is hereby approved for a one month test period. All data pertinent to the test shall be submitted to the Division within 15 days following completion of the test.

If results of the test are such that your company desires to continue production with this down hole arrangement it will be necessary to obtain a permit for underground injection and conversion of the well to a Class II injection well. This application can be made in accordance with Utah Adm. Code R649-5, Underground Injection Control of Recovery Operations and Class II Injection Wells.

Please contact this office if we can be of further assistance in this matter.

Sincerely,

Associate Director, Oil & Gas

Enclosures

cc: BLM, Vernal District



June 11, 1997

John Baza State Division Oil, Gas & Mining 1594 W. N. Temple Ste.1210 Salt Lake City, Utah

Dear John,

Please release well information to Bob Ballow on Freedom Energy Inc.'s Center Fork #17-4 well in Uintah County, Utah.

If this is a problem please call me at 303-592-3022 Ext. 304.

Sincerely,

Steve Shefte

**Exploration Manager** 

Down Sheft



1050 17th Street, Suite 710, Denver, Colorado 80265

#### **FAX COVER SHEET**

Date: JUNE 11 1997

From: STEVE SHEFTC

Phone Number: (303) 592-3022 ext.

(303) 592-2988 FAX

TO: JUHN BAZA

Number of pages to follow: \_\_\_\_/

Company: STATE WIAH

Fax Number: 801-359-3940

Comments:

My # 15 303-592-3022 EXT 304.

THANKS, P.S. GO JAZZ

THIS FACSIMILE TRANSMISSION AND ANY ACCOMPANYING DOCUMENTS CONTAIN INFORMATION BELONGING TO THE SENDER WHICH MAY BE CONFIDENTIAL AND LEGALLY PRIVILEGED. THIS INFORMATION IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHOM THIS FACSIMILE TRANSMISSION WAS SENT AS INDICATED ABOVE. IF YOU ARE NOT THE INTENDED RECIPIENT, ANY COPYING, DISCLOSURE, DISTRIBUTION OR ACTION ON THE INFORMATION CONTAINED HEREIN IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS FACSIMILE TRANSMISSION IN ERROR, PLEASE CALL US TO ARRANGE FOR THE RETURN OF THE DOCUMENTS TO US AT OUR EXPENSE. THANK YOU.

FORM 10

STATE OF UTAH

DIVISION OF OIL, GAS AND MINING

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801

Page \_ 1 \_ of \_ 1

## MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:			UTAI	H ACCOUNT NUMBER	N3285	
FREEDOM ENERGY INC 1050 17TH ST STE 710			REPO	ORT PERIOD (MONTH	/YEAR): 12 / 97	·
DENVER CO 80265			AME	NDED REPORT□ (F	Highlight Changes)	
ell Name	Producing	Well	Days		Production Volumes	
Pl Number Entity Location	Zone	Status	Oper	OIL(BBL)	GAS(MCF)	WATER(BBL)
HANGING ROCK FEDERAL 24-13 4304732603 11723 115 23E 24	WSTC			UTULOL 408	Hunging Rock Unit	
THIMBLE ROCK FEDERAL 23-15 4304732604 11759 11S 24E 23 HANGING ROCK FEDERAL I 1-16	MVRD			466761	Hunging Rock Unit Thimble Rock Unit Hunging Rock Unit	
4304732679 11889 12S 23E 1 HANGING ROCK FEDERAL   12-4	WSTC				Hanging Rocklint	
4304732748 11889 12S 23E 12	WSTC			U57455	"	
HANGING ROCK FEDERAL F 7-6 4304732751 11889 125 24E 7	WSTC			UTULolo42Lo	c)	
HANGING ROCK FEDERAL   1-14 4304732871 11889 125 23E 1 Y FEDERAL F 6-15	WSTC			457455	(¿	
4304732757 12037 12S 24E 6	WSTC			U03424A		
CENTER FORK F 17-4 4304732750 12038 125 24E 17	WSMVD			UTU 75206		
TUCKER FEDERAL F 8-4 4304732872 12125 128 24E 8	WSTC			lt1470239		
Tucku Fedural F 8-2 4 4304732993 99999 125 24E 8	DPL			UTU 70239		
		• • • • • • • • • • • • • • • • • • • •				
		-				
			TOTALS			
MMENTS:						
					····	
	<del>-</del>					
coy certify that this report is true and complete to t	the best of my	knowledge.		Da	te:	
e and Signature:					elephone Number:	

Division of Oil, Gas and Mining

## OPERATOR CHANGE WORKSHEET

Attach all documentation received by the division regarding this change. Initial each listed item when completed. Write N/A if item is not applicable.

Routing	
1480	6-LEC
<del>2-GH</del>	7-KAS
3-DTS-	8-SI 1
4-VLD	9-FILE
5-JRB	

		nge of Operator (well sold)  Grantion of Operator  Designation of Agent  Operator Name Change Only	
The o	per	ator of the well(s) listed below has changed, effective: 1-1-98	
TO: (	(nev	v operator) ROSEWOOD RESOURCES INC (address)  100 CRESCENT COURT \$500  DALLAS TX 75201  FROM: (old operator) (address)	FREEDOM ENERGY INC 1050 17TH ST STE 710 DENVER CO 80265
		Phone: (214)871-5718 Account no. N7510	Phone: (303)592-3022 Account no. N3285
WEL	L(S	attach additional page if needed:	
Name: Name: Name: Name: Name: Name:	TU	OBY FED F 6-15/WSTC       API:       43-047-32757       Entity:       12037       S       6       T         ENTER FORK F 17-4/WS API:       43-047-32750       Entity:       12038       S       17       T         OCKER FED F 8-4/WSTC ICKER FED F 8-2/DRL       API:       43-047-32872       Entity:       12125       S       8       T         API:       API:       43-047-32993       Entity:       99999       S       8       T         API:       API:       Entity:       S       T         API:       Entity:       S       T         Entity:       S       T         Entity:       S       T	12S         R         24E         Lease:         U08424A           12S         R         24E         Lease:         UTU75206           12S         R         24E         Lease:         UTU70239           12S         R         Lease:         UTU70239           R         Lease:         Lease:           R         Lease:         Lease:           R         Lease:         Lease:
OPER	RAT	FOR CHANGE DOCUMENTATION	
Lec 2	1	(r649-8-10) Sundry or other legal documentation has been received from the form). $(\ell_{\ell\ell}/d/-2\ell-98)$ (r649-8-10) Sundry or other legal documentation has been received from form). $(\ell_{\ell\ell}/d-28-98)$ ( $\ell_{\ell\ell}/d-3-9-98$ )	
<u>N/H</u> 3	3. 7	The <b>Department of Commerce</b> has been contacted if the new operator ab wells in Utah. Is the company registered with the state? (yes/no)	ove is not currently operating any
Lic 4	C	FOR INDIAN AND FEDERAL WELLS ONLY. The BLM has been contained of BLM status in comments section of this form. BLM approval of I changes should ordinarily take place prior to the division's approval, and through 9 below.	Sederal and Indian well operator
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. (	Changes have been entered in the Oil and Gas Information System (3270)	for each well listed above.
Jec 6	. (	(3,24-98)  Cardex file has been updated for each well listed above. (3,24-98)	
<u>Hec</u> 7	. V	Well file labels have been updated for each well listed above. (3 24 98)	
<u>lec</u> 8	. C	Changes have been included on the monthly "Operator, Address, and Account of Trust Lands, Sovereign Lands, UGS, Tax Commission, etc. (3.24.48)	t Changes" memo for distribution
He 9	. A	A folder has been set up for the Operator Change file, and a copy of the office during routing and processing of the original documents.	is page has been placed there for

F@RM 316@-5 (June 1990)

## **DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT**

FORM APPROVED
Budget Bureau No. 1004-

0135

Expires.	MICHAEL	J., 14	,55
			. : -

		Lease Designation and Serial No.					
SUNDRY NOTICES AND	REPORTS ON WELLS	UTU-75206					
Do not use this form for proposals to drill or	to deepen or reenter a different reservoir.	6. If Indian, Allottee or Tribe Name					
Use "APPLICATION FOR PE	RMIT -" for such proposals	N/A					
		7. If Unit or CA, Agreement Designation					
SUBMIT IN T	RIPLICATE						
1. Type of Well	.,	-I <sub>N/A</sub>					
		8. Welt Name and No.					
□Oil □Gas □							
Oil X Gas Well Other		CENTER FORK F 17-4					
		9. API Well No.					
2. Name of Operator		43-047-32750					
FREEDOM ENERGY, INC.		10. Field and Pool, or Exploratory Area					
3. Address and Telephone No.		Wildcat					
1050 17TH. ST. STE. 710 DENVER, CO	· · · · · · · · · · · · · · · · · · ·	11. County or Parish, State					
4. Location of Well (Footage, Sec., T., R., M., or Survey	Description)						
SON FIAM CONTRACTOR ANAMANA OF O 47 TA	200 5045						
580' FWL, 688' FNL NW/NW SEC.17-T1		Uintah County, Utah					
12. CHECK APPROPRIATE E	BOX(es) TO INDICATE NATURE OF NOTIC						
TIPE OF SUBMISSION	I YPE (	OF ACTION					
X Notice of Intent	Abandonment	Change of Plans					
	Recompletion	New Construction					
Subsequent Report	Plugging Back	Non-Routine Fracturing					
	Casing Repair	Water Shut-Off					
Final Abandonment Notice	Altering Casing	Conversion to Injection					
_	Other CHANGE OF OPERATO	R Dispose Water					
	(Note: Report results of multiple comple	etion on Well					
	Completion or Recompletion Report an						
13. Describe Proposed or Completed Operations (Clearly							
work. If well is directionally drilled, give subsurface lo							
	ources, Inc., Ste. 500, 100 Crescent Cou						
	enter Fork F 17-4-T12S-R24E; Lease# U						
	e under the terms and conditions of the le						
	d coverage is provided by Rosewood Re	sources, Inc.					
Bond # UT-0627							
		- 日本日本語 (統領 2 1 <b>1899</b> ) コンプロー					
	- -	was seen					
		Commence of the second of the					
14. I hereby certify that the foregoing is true and							
Signed You tranks	Title Vice-President	Date 01/01/98					
(This space for Federal or State office use)							
Approved by	Title	Date					
Conditions of approval, if any:							

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

FORM 3160-5 (June 1990)

Approved by

Conditions of approval, if any:

## ÚNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

FORM APPROVED Budget Bureau No. 1004-0135

Expires: March 31, 1993

Date

5. Lease Designation and Serial No. SUNDRY NOTICES AND REPORTS ON WELLS UTU-75206 Do not use this form for proposals to drill or to deepen or reenter a different reservoir. 6. If Indian, Allottee or Tribe Name Use "APPLICATION FOR PERMIT -" for such proposals 7. If Unit or CA, Agreement Designation SUBMIT IN TRIPLICATE N/A 1. Type of Well 8. Well Name and No. Oil **CENTER FORK F #17-4** Well 9. API Well No. 43-047-32750 2. Name of Operator 10. Field and Pool, or Exploratory Area ROSEWOOD RESOURCES, INC. 3. Address and Telephone No. P.O. Box 1668, Vernal, UT 11. County or Parish, State 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) **UINTAH CO., UTAH** NW/NW T12S, R24E, SECTION 17 CHECK APPROPRIATE BOX(es) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA 12. TYPE OF ACTION TYPE OF SUBMISSION Notice of Intent Abandonment Change of Plans Recompletion **New Construction** Subsequent Report Plugging Back Non-Routine Fracturing Water Shut-Off Casing Repair Final Abandonment Notice Altering Casing Conversion to Injection Other Change of Operator Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.) 13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\* Please be advised that effective 1/1/98, Rosewood Resources, Inc. is considered to be the operator of the Center Fork F #17-4, referenced above; and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond coverage is provided by Certificate of Deposit, BLM Bond #UT-0627. DIV. OF OR LEAS & MINING COPIES: ORIG. & 2-BLM; DIV. OG&M; J MCQUILLEN 14. I hereby certify that the foregoing is true and correct Date 03/05/98 Title Administrative Assistant 1 James Signed (This space for Federal or State office use)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States andy false, fictitious or fraudulent statements or representations as to any mater within its jurisdiction.

Title



## United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Vernal Field Office 170 South 500 East Vernal, Utah 84078-2799

Phone: (435) 781-4400 Fax: (435) 781-4410

IN REPLY REFER TO: 3162.3 UT08300

March 19, 1998

MAR 2 3 1998

DIV. OF OIL, GAS & MINING

Rosewood Resources, Inc. Attn: Lucy Nemec P O Box 1668 Vernal UT 84078

Re:

Well No. Center Fork F 17-4 NWNW, Sec. 17, T12S, R24E

Lease U-75206 Uintah County, Utah

### Dear Lucy:

This correspondence is in regard to the self-certification statement submitted requesting a change in operator for the referenced well. After a review by this office, the change in operator request is approved. Effective immediately, Rosewood Resources, Inc. is responsible for all operations performed on the referenced well. All liability will now fall under your bond, BLM Bond No. MT0627, for all operations conducted on the referenced well on the leased land.

If you have any other questions concerning this matter, please contact Margie Herrmann or Pat Sutton of this office at (435) 781-4400.

Sincerely,

Howard B. Cleavinger II Assistant Field Manager Minerals Resources

cc:

Freedom Energy Inc.

Kidd Family Partnership Security Energy Co. St Anselm Exploration Co. FORM 3160-5 (June 1990)

## TED STATES **DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT**

SUNDRY NOTICES	AND	DEDODTS	ONL	A/E1 I	•
SUBURT NUTLES	ANII	KERLIKIS	UNIV	<i>.</i> v	

ľ	
	FORM APPROVED
	Budget Bureau No. 1004-0135
	Expires: March 31, 1993

					•	
5.	Lease	Des	ignation	and	Serial	No

SUNDRY NOTICES AND REPORTS ON WELLS	UTU-75206				
Do not use this form for proposals to drill or to deepen or reenter a different reservoir.	6. If Indian, Allottee or Tribe Name				
Use "APPLICATION FOR PERMIT -" for such proposals	N/A				
	7. If Unit or CA, Agreement Designation				
SUBMIT IN TRIPLICATE	N/A				
1. Type of Well	O Well Name and Ma				
UII Gas	8. Well Name and No.				
Well X Well Other	CENTER FORK F #17-4				
	9. API Well No.				
2. Name of Operator	43-047-32750				
ROSEWOOD RESOURCES, INC.	10. Field and Pool, or Exploratory Area				
3. Address and Telephone No.					
P.O. Box 1668, Vernal, UT 435-789-0414	11. County or Parish, State				
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) NW/NW T12S, R24E, SECTION 17	UINTAH CO., UTAH				
12. CHECK APPROPRIATE BOX(es) TO INDICATE NATURE OF NOTI	CE, REPORT, OR OTHER DATA				
	E OF ACTION				
X Notice of Intent Abandonment	Change of Plans				
Recompletion	New Construction				
Subsequent Report Plugging Back	Non-Routine Fracturing				
Casing Repair	Water Shut-Off				
Final Abandonment Notice Altering Casing	Conversion to Injection				
X Other SI STATUS	Dispose Water				
(Note: Report results of multiple of					
Completion or Recompletion Repo					
13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent of work. If well is directionally drilled, give subsurface locations and measured and true vertical depths	ates, including estimated date of starting any proposed for all markers and zones pertinent to this work.)*				
Rosewood Resources is currently conducting a geological evaluation on all	Uintah Basin properties and				
requests a one year extension of the Shut In status of the above reference	d well. Rosewood is currently				
waiting on a Salt water Disposal Well permit.					
	MECEIVEM				
	[\\				
	DIV OF OUL CAS & MINING				
	DIV. OF OIL, GAS & MINING				
COPIES: ORIG. & 2-BLM; DIV. OG&M J MCQUILLEN					
14. I hereby certify that the foregoing is true and correct					
Till Administrative Assist	apt Date 03/16/99				
Acces Acces	pted by the —				
( F. days on Made office (100)	Division of				
	a and Mimina				
Approved by Title _	s and Mining				
Approved by Title Oil, Ga Conditions of approval, if any: OPY SENT TO OPERATOR Date: 3	s and Mining -24-99				
Approved by Title Oil, Ga					

## **OPERATOR CHANGE WORKSHEET**

-	$\overline{}$	T	TTE		1	
К	()	ı	л	Πſ	NG	

1. GLH 2. CDW

. FILE

## X Change of Operator (Well Sold)

Designation of Agent

Operator Name Change

Merger

FROM: (Old Operator):		TO: ( New O	perator):				
ROSEWOOD RESOURCES INC		MCELVAIN OIL & GAS PROPERTIES INC					
Address: P O BOX 1668		Address: 1050 17TH STREET, STE 1800					
1001700170							
VERNAL, UT 84078		DENVER, CO 80265-1801					
Phone: 1-(435)-789-0414		Phone: 1-(303)					
Account No. N7510		Account No.					
	CA No.	Unit:					
	5111101						
WELL(S)	SEC TWN	LADE NO	ENTITY	TEACE	WELL	WELL	
JANE	RNG	API NO	I .	TYPE	TYPE	STATUS	
NAME ROSEWOOD FEDERAL 28-8		43-047-32840	NO 12442		GW	P	
ROSEWOOD FEDERAL H 22-16		43-047-32840		FEDERAL		TA	
ROSEWOOD FEDERAL H 22-16		43-047-33180		FEDERAL		P	
HANGING ROCK FEDERAL I 1-4		43-047-33132		FEDERAL		P	
HANGING ROCK FEDERAL I 1-4 HANGING ROCK FEDERAL I 10-13		43-047-32833		FEDERAL		S	
HANGING ROCK FEDERAL I 12-12		43-047-33096		FEDERAL		s	
		43-047-33101		FEDERAL		S	
HANGING ROCK I 12-9 HANGING ROCK I 15-7		43-047-33101		FEDERAL		S	
		<u> </u>	12037	FEDERAL		P	
ΓOBY FEDERAL F 6-15 ΓUCKER FEDERAL F 8-2		43-047-32737	•	FEDERAL		P	
FUCKER FEDERAL F 8-2		43-047-32993		FEDERAL		P	
CENTER FORK FEDERAL 17-4		43-047-32872		FEDERAL		S	
CENTER FORK FEDERAL 17-4	17-123-24E	43-047-32730	12036	TEDERAL	Q W		
Marine 1997						1	
				1	<del> </del>		
			<u> </u>		l		
OPERATOR CHANGES DOCUMENTATE  Enter date after each listed item is completed  1. (R649-8-10) Sundry or legal documentation was represented.		RMER operator	on:	04/29/2002			
(110.50.10) 54.445					-		
2. (R649-8-10) Sundry or legal documentation was r	eceived from the NEV	V operator on:	04/29/200	2			
3. The new company has been checked through the I	Department of Comn	nerce, Division	of Corpora	tions Datab	ase on:	07/03/20	
4. Is the new operator registered in the State of Utah	: YES	_Business Numl	ber:	5 <u>078926-014</u>	<u>1</u> 3		
E IENO 4	NT/A						
5. If <b>NO</b> , the operator was contacted contacted on:	N/A	_					

Federal and Indian Lease Wells: The BLM and or the BIA has approved the merger, name change,

06/18/2002

or operator change for all wells listed on Federal or Indian leases on:

7.	Federal and Indian Units:
	The BLM or BIA has approved the successor of unit operator for wells listed on: 06/18/2002
8.	Federal and Indian Communization Agreements ("CA"):
	The BLM or BIA has approved the operator for all wells listed within a CA on:  N/A
9.	Underground Injection Control ("UIC") The Division has approved UIC Form 5, Transfer of Authority to Inject,
	for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on:  N/A
D.	ATA ENTRY:
1.	Changes entered in the Oil and Gas Database on: 07/05/2002
2.	Changes have been entered on the Monthly Operator Change Spread Sheet on: 07/05/2002
3.	Bond information entered in RBDMS on: N/A
4.	Fee wells attached to bond in RBDMS on:  N/A
SI	CATE WELL(S) BOND VERIFICATION:
1.	State well(s) covered by Bond Number:  N/A
FF	DERAL WELL(S) BOND VERIFICATION:
1.	Federal well(s) covered by Bond Number:  UT 1268
ĪN	DIAN WELL(S) BOND VERIFICATION:
1.	Indian well(s) covered by Bond Number:  N/A
FE	E WELL(S) BOND VERIFICATION:
1.	(R649-3-1) The <b>NEW</b> operator of any fee well(s) listed covered by Bond Number  N/A
	The FORMER operator has requested a release of liability from their bond on:  N/A
	The Division sent response by letter on:  N/A
LI	ASE INTEREST OWNER NOTIFICATION:
3.	(R649-2-10) The <b>FORMER</b> operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on:  N/A
CC	MMENTS:
_	
_	

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES

	5. LEASE DESIGNATION AND SERIAL NUMBER: See Attached			
SUNDR'	Y NOTICES AND REPORT	S ON WEL	LS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill	new wells, significantly deepen existing wells below cu laterals. Use APPLICATION FOR PERMIT TO DRILL	rrent bottom-hole dep form for such proposi	oth, reenter plugged wells, or to	7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL OIL WELL				8. WELL NAME and NUMBER:
2. NAME OF OPERATOR:				9. API NUMBER:
MCELVAIN OIL & GAS F  3. ADDRESS OF OPERATOR:	ROPERTIES, INC.		PHONE NUMBER:	10. FIELD AND POOL, OR WILDCAT:
	TY Denver STATE CO ZIE	80265	(303) 893-0933	16. FIEED AND FOOL, GRANEDS, II.
4. LOCATION OF WELL			- 구매하지 않았다는 생활성하	COUNTY:
FOOTAGES AT SURFACE:			Astro Maria Santa.	COOM A: COMMAND TO SERVICE STREET
	NGE, MERIDIAN:	<u> </u>	·	STATE: UTAH
11. CHECK APP	ROPRIATE BOXES TO INDICAT	TE NATURE	OF NOTICE, REPO	ORT, OR OTHER DATA
TYPE OF SUBMISSION			YPE OF ACTION	
NOTICE OF INTENT	ACIDIZE	DEEPEN	TOPAT	REPERFORATE CURRENT FORMATION SIDETRACK TO REPAIR WELL
(Submit in Duplicate)	ALTER CASING  CASING REPAIR	FRACTURE	TREAT	TEMPORARILY ABANDON
Approximate date work will start:	CHANGE TO PREVIOUS PLANS	OPERATOR		TUBING REPAIR
5/1/2002	CHANGE TUBING	PLUG AND		VENT OR FLARE
SUBSEQUENT REPORT	CHANGE WELL NAME	PLUG BACI		WATER DISPOSAL
(Submit Original Form Only)	CHANGE WELL STATUS		ON (START/RESUME)	WATER SHUT-OFF
Date of work completion:	COMMINGLE PRODUCING FORMATIONS		ION OF WELL SITE	OTHER:
	CONVERT WELL TYPE		ETE - DIFFERENT FORMATION	
McElvain Oil & Gas Prop Bond # RLB0004154	COMPLETED OPERATIONS. Clearly show all userties, Inc. will take over as opera			
Operator # N2100				APR 2 9 2002
				DIVISION OF OIL, GAS AND MINING
Name Gary Tare	solu	<sub>.</sub> Ti		Jent Rosewad Resources, Indi
Signature Jan	y Jarla	Da	ate 4/23	102
NAME (PLEASE PRINT) John D. S	Steuble		Engineering Ma	nager Mcelvain O & G Properties
SIGNATURE JOHN V	Steuble	DAT	4/12/	02
(This space for State use only)				

API#	FED#	POOL#	COUNTY	LEGAL	WELL NAME
43-047-32871	UTU-57455	OIL SPRINGS	UNITAH	1 12S 23E SESW	HANGING ROCK FED I # 1-14 WS
43-047-32855	UTU-57455	OIL SPRINGS	UINTAH	1 12\$ 23E NWNW	HANGING ROCK I # 1-4 WS
43-047-32679	UTU-57455	OIL SPRINGS	UNITAH	1 12S 23E SESE	HANGING ROCK FED I # 1-16
43-047-33098	UTU-57455	OIL \$PRING\$	UNITAH	10 12S 23E NESW	HANGING ROCK I # 10-13 WS
43-047-32935	UTU-57455	OIL SPRINGS	UNITAH	11 12S 23E SENE	HANGING ROCK I # 11-8 (WSMVD)
43-047-32936	UTU-57455	OIL SPRINGS	UNITAH	12 12\$ 23E NWNE	HANGING ROCK I # 12-2
43-047-33096	UTU-57455	OIL SPRINGS	UNITAH	12 12\$ 23E NWSW	HANGING ROCK I # 12-12 WS
43-047-33101	UTU-57455	OIL SPRINGS	UNITAH	12 12S 23E NESE	HANGING ROCK I # 12-9 WS
43-047-32748	UTU-57455	OIL SPRINGS	UNITAH	12 12S 23E NWNW	HANGING ROCK I # 12-4
43-047-33099	UTU-57455	OIL SPRINGS	UNITAH	15 12S 23 E SWNE	HANGING ROCK I # 15-7
43-047-33100	UTU-66426	OIL SPRINGS	UNITAH	7 12S 24E NWSE	HANGING ROCK F # 7-10
43-047-32937	UTU-66426	OIL SPRINGS	UNITAH	7 12S 24E SENE	HANGING ROCK F # 7-8
43-047-32751	UTU-66426	OIL SPRINGS	UNITAH	7 12S 24E SENW	HANGING ROCK F # 7-6
43-047-32872	UTU-70239	OIL SPRINGS	UNITAH	8 12S 24E NWNW	TUCKER FEDERAL F # 8-4
43-047-32993	UTU- <b>7</b> 0239	OIL SPRINGS	UNITAH	8 12\$ 24E NWNE	TUCKER FEDERAL F # 8-2
43-047-33132	UTU-73019	BUCK CANYON	UNITAH	5 12S 22E SENW	ROSEWOOD # 5-6
43-047-32604	UTU-66761	ASPHALT WASH	UNITAH	23 11S 24E SESE	THIMBLE ROCK FED # 23-15
43-047-32757	UTU-08424-A	OIL SPRINGS	UNITAH	6 12S 24E SWSE	TOBY FEDERAL F # 6-15
43-047-32840	UTU-65355	BUCK CANYON	UNITAH	19 11\$ 22E NESE	ROSEWOOD FED # 28-8
43-047-32603	UTU-66408	ROCK HOUSE	UNITAH	24 11S 23E SWSW	HANGING ROCK # 24-13
43-047-32750	UTU- <b>752</b> 06	OIL SPRINGS	UNITAH	17 12\$ 24E NWNW	CENTER FORK FED # 17-4
43-047-33186	UTU-66409	ROCK HOUSE	UNITAH	22 11S 23E SESE	ROSEWOOD FED H # 22-16

Phoenix/Rosewood 1



## United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Vernal Field Office 170 South 500 East Vernal, Utah 84078-2799 http://www.blm.gov/utah/vernal

Phone: (435) 781-4400 Fax: (435) 781-4410

IN REPLY REFER TO: 3162.3 UT08300

June 24, 2002

McElvain Oil & Gas Properties, Inc. 1050 17<sup>th</sup> Street, Suite 1800 Denver, Colorado 80265

Re:

Well No. Center Fork F 17-4 NWNW, Sec. 17, T12S, R24E Uintah County, Utah Lease No. UTU-75206

#### Gentlemen:

This correspondence is in regard to the self-certification statement submitted requesting a change in operator for the referenced well. After a review by this office, the change in operator request is approved. Effective immediately, McElvain O&G Properties, Inc. is responsible for all operations performed on the referenced well. All liability will now fall under your bond, BLM Bond No. UT1268, for all operations conducted on the referenced well on the leased land.

If you have any other questions concerning this matter, please contact Leslie Walker or Pat Sutton of this office at (435) 781-4400.

Sincerely,

Edwin I. Forsman Petroleum Engineer

CC:

UDOGM – Jim Thompson Rosewood Resources

RECEIVED

JUL 0 1 2002

DIVISION OF OIL, GAS AND MINING

## Division of Oil, Gas and Mining

## **OPERATOR CHANGE WORKSHEET**

(for state use only)

ROUTING						
1.	CDW					

Change of Operator (Well Sold)	X - Operator Name Change							
The operator of the well(s) listed below has chan	8/11/2011							
FROM: (Old Operator):		TO: ( New Operator):						
N2100-McElvain Oil & Gas Properties, Inc.		N3795-McElva	ain Energy,	Inc.				
1050 17th Street, Suite 2500						uite 2500		
Denver, CO 80265				Denver	, CO 80265	5		
Phone: 1 (303) 893-0933				Phone: 1 (303)	893-0933			
CA No.				Unit:				
WELL NAME	SEC	TWN	RNG	API NO	ENTITY	LEASE	WELL	WELL
SEE ATTACHED LIST - 13 Wells					NO	TYPE	TYPE	STATUS
SEE ATTACHED LIST - 15 Wells							-	
				l		I.		
OPERATOR CHANGES DOCUMENT	ATI	ON						
Enter date after each listed item is completed								
1. (R649-8-10) Sundry or legal documentation wa	is rec	eived f	rom the	FORMER ope	erator on:	8/30/2011		
2. (R649-8-10) Sundry or legal documentation wa				-		8/30/2011	-	
3. The new company was checked on the <b>Depart</b>	ment	of Cor	nmerce	, Division of Co	orporations	Database o	on:	8/30/2011
4a. Is the new operator registered in the State of U	Jtah:			Business Numb	per: 8	8078926-014	13	
5a. (R649-9-2)Waste Management Plan has been re	ceive	d on:		•			•	
5b. Inspections of LA PA state/fee well sites comp				n/a	-			
5c. Reports current for Production/Disposition & S				ok	•			
6. Federal and Indian Lease Wells: The BL			e RIA h		merger na	me change		
or operator change for all wells listed on Feder					BLM	not yet	BIA	
7. Federal and Indian Units:	ai oi i	ilulan .	icases o	11.	BLIVI	. Hot yet	DIA	-
The BLM or BIA has approved the successor	ofur	nit one:	ator for	wells listed on		not yet		
8. Federal and Indian Communization Ag					7.	not yet	•	
The BLM or BIA has approved the operator:			-			n/a		
9. Underground Injection Control ("UIC"		***************************************		vision has appre	oved UIC F		sfer of A	uthority to
Inject, for the enhanced/secondary recovery un	•	iect fo				-	n/a	
DATA ENTRY:	ii pi c	J <b>ee</b> t 10	1 1110 110	iter disposar we	ii(b) iibiod o	11.		-
1. Changes entered in the Oil and Gas Database	on:			8/31/2011				
2. Changes have been entered on the Monthly O		or Cha	nge Sp			8/31/2011		
3. Bond information entered in RBDMS on:				n/a			•	
4. Fee/State wells attached to bond in RBDMS on				n/a				
5. Injection Projects to new operator in RBDMS of				n/a				
6. Receipt of Acceptance of Drilling Procedures f	or AF	D/Nev	v on:		8/30/2011			
BOND VERIFICATION:								
1. Federal well(s) covered by Bond Number:				COB000010	- )			
2. Indian well(s) covered by Bond Number:	17-3-1:	_4_4_	1 1-	n/a	-7	!		
3a. (R649-3-1) The <b>NEW</b> operator of any fee well						n/a	2	
3b. The FORMER operator has requested a releas		_	from th	ieir bond on:	n/a			
LEASE INTEREST OWNER NOTIFIC				1	11 1 .	4C. d	D: : :	
4. (R649-2-10) The <b>FORMER</b> operator of the fee of their responsibility to notify all interest owne						ter from the	Division	
COMMENTS:	19 OT [	ins cit	mge on	•	n/a			<del></del>

	FORM 9			
	DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS AND M			5. LEASE DESIGNATION AND SERIAL NUMBER:
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
Do not use this form for proposals to drill drill horizontal	7. UNIT or CA AGREEMENT NAME:			
1. TYPE OF WELL OIL WELL	8. WELL NAME and NUMBER: SEE ATTACHED LIST			
<ol><li>NAME OF OPERATOR: McElvain Oil &amp; Gas Proportion</li></ol>	erties, Inc. N2/00			9. API NUMBER:
	TY Denver STATE CO ZIF		PHONE NUMBER: (303) 893-0933	10. FIELD AND POOL, OR WILDCAT:
LOCATION OF WELL     FOOTAGES AT SURFACE:				COUNTY
FOOTAGES AT SURFACE.				COUNTY:
QTR/QTR, SECTION, TOWNSHIP, RA	NGE, MERIDIAN:			STATE: UTAH
11. CHECK APP	ROPRIATE BOXES TO INDICAT	TE NATURE O	F NOTICE, REPO	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYF	PE OF ACTION	
☐ NOTICE OF INTENT	ACIDIZE	DEEPEN		REPERFORATE CURRENT FORMATION
(Submit in Duplicate)	ALTER CASING	FRACTURE TI	REAT	SIDETRACK TO REPAIR WELL
Approximate date work will start:	CASING REPAIR	☐ NEW CONSTR	RUCTION	TEMPORARILY ABANDON
	CHANGE TO PREVIOUS PLANS	✓ OPERATOR C	HANGE	TUBING REPAIR
	CHANGE TUBING	PLUG AND AB	ANDON	VENT OR FLARE
SUBSEQUENT REPORT	CHANGE WELL NAME	PLUG BACK		WATER DISPOSAL
(Submit Original Form Only)	CHANGE WELL STATUS	PRODUCTION	(START/RESUME)	WATER SHUT-OFF
Date of work completion:	COMMINGLE PRODUCING FORMATIONS	RECLAMATIO	N OF WELL SITE	OTHER:
	CONVERT WELL TYPE	RECOMPLETE	- DIFFERENT FORMATION	
12. DESCRIBE PROPOSED OR C	OMPLETED OPERATIONS. Clearly show all p	pertinent details inclu	ding dates, depths, volume	es, etc.
McElvain Oil & Gas Prope This is ONLY a name cha	erties, Inc. has changed it's name ange.		Energy, Inc. Effecti 195	ive August 11, 2011.
Our BLM Bond # is COB	- 000010		•	
Attached is a well list.				
NAME (PLEASE PRINT) Deborah I	Powell	TITLE	Eng Tech Manag	er
111	D. 11	1116		
SIGNATURE	Value	DATE	8/29/2011	

(This space for State-use only APPROVED 8/31/30/1

Coulcul Russell

Division of Oil, Gas and Mining

(5/2000) Earlene Russell, Engineering Technician (See Instructions on Reverse Side)

**RECEIVED** 

AUG 3 0 2011

well_name	sec	twp	rng	api	entity	lease	well	stat	1 num
CENTER FORK F 17-4	17	120S	240E	4304732750	12038	Federal	GW	S	UTU-75206
TOBY FEDERAL F 6-15	06	120S	240E	4304732757	12037	Federal	GW	P	UTU-08424A
ROSEWOOD FED 28-8	28	110S	220E	4304732840	12442	Federal	GW	S	UTU-65355
HANGING ROCK FED I 1-4	01	120S	230E	4304732855	12389	Federal	GW	S	UTU-57455
TUCKER FEDERAL F 8-4	08	120S	240E	4304732872	12125	Federal	GW	P	UTU-70239
TUCKER FEDERAL F 8-2	08	120S	240E	4304732993	12386	Federal	GW	P	UTU-70239
TUCKER FED 8-12	08	120S	240E	4304734729	13740	Federal	GW	S	UTU-70239
HANGING ROCK FED 11-9	11	120S	230E	4304734730	14017	Federal	GW	P	UTU-57455
HANGING ROCK 1-8	01	120S	230E	4304736042	15514	Federal	GW	P	UTU-57455
TUCKER FED 8-6	08	120S	240E	4304736837		Federal	GW	P	UTU-70239
TUCKER FED 8-10	08	120S	240E	4304739187	16399	Federal	GW	S	UTU-70239
HANGING ROCK FED 1-2	01	120S	230E	4304739430		Federal			UTU-57455
ATCHEE WASH 33-9	33	100S	230E	4304740631					UTU-73451

## Division of Oil, Gas and Mining

## **OPERATOR CHANGE WORKSHEET (for state use only)**

ROUTING	
CDW	

X - Change of Operator (Well Sold)	Operator Name Change/Merger									
The operator of the well(s) listed below has chan			8/1/2014							
FROM: (Old Operator): McElvain Energy, Inc. N3795 1050 17th Street, Suite 2500 Denver, CO 80265	Onshore Roya P.O. Box 2326	P.O. ( New Operator): Onshore Royalties, LLC N4140 P.O. Box 2326 Victoria, TX 77902								
303-893-0933			361-570-1600	361-570-1600						
CA No.			Unit:	Haning R	ock					
WELL NAME	SEC TV	WN RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS			
See Attached List										
OPERATOR CHANGES DOCUMENT.  Enter date after each listed item is completed  1. (R649-8-10) Sundry or legal documentation wa  2. (R649-8-10) Sundry or legal documentation wa  3. The new company was checked on the Departs  4a. Is the new operator registered in the State of U	NEW operator	r on: C <mark>orporation</mark> :	8/14/2014 8/14/2014 s Database on: 9116573-0161		8/15/2014					
5a. (R649-9-2)Waste Management Plan has been re 5b. Inspections of LA PA state/fee well sites comp	ceived o	n:	N/A N/A	_		•				
5c. Reports current for Production/Disposition & S		on:	8/15/2014	_						
6. Federal and Indian Lease Wells: The BL	M and o	r the BIA l	nas approved th	e merger, na	me change,					
or operator change for all wells listed on Federa	al or Indi	an leases o	on:	BLM	Not Yet	BIA	_ N/A			
7. Federal and Indian Units:										
The BLM or BIA has approved the successor		_		1:	Not Yet	-				
8. Federal and Indian Communization Ag										
The BLM or BIA has approved the operator					N/A	•				
9. Underground Injection Control ("UIC"	•	-				•				
Inject, for the enhanced/secondary recovery un DATA ENTRY:	it/projec	t for the w	ater disposal we	ell(s) listed o	on:	<u>N/A</u>	_			
			9/15/2014							
<ol> <li>Changes entered in the Oil and Gas Database</li> <li>Changes have been entered on the Monthly Oil</li> </ol>		^hanσe Sr		<del>-</del>	9/15/2014					
3. Bond information entered in RBDMS on:	ociutoi (	onunge of	N/A	•	<u> </u>	-				
4. Fee/State wells attached to bond in RBDMS on	:		N/A							
5. Injection Projects to new operator in RBDMS of			N/A							
6. Receipt of Acceptance of Drilling Procedures f				N/A	•					
7. Surface Agreement Sundry from NEW operator	Surface we	ells received on:		N/A	-					
BOND VERIFICATION:			T. T. T. T. C. C. C. A. A.							
1. Federal well(s) covered by Bond Number:	UTB000644	_								
<ul><li>2. Indian well(s) covered by Bond Number:</li><li>3a. (R649-3-1) The NEW operator of any state/fe</li></ul>	N/A ered by Bond N	_ Jumber	N/A							
· · · · · · · · · · · · · · · · · · ·										
LEASE INTEREST OWNER NOTIFIC		=	nen bond on:	N/A	-					
4. (R649-2-10) The <b>NEW</b> operator of the fee wells			l and informed	by a letter fr	om the Division					
of their responsibility to notify all interest owne				N/A	om me Division					
COMMENTS:	.5 01 11115	Thungs Of		14/11						

## McElvain Energy, Inc N3795 to Onshore Royalties, LLC. N4140 Effective 8/1/2014

Well Name	Section	TWN	RNG	API Number	Entity	Mineral	Well	Well	Unit
						Lease	Type	Status	
HANGING ROCK FEDERAL 24-13	24	110S	230E	4304732603	11723	Federal	GW	P	HANGING ROCK
HANGING ROCK FEDERAL I 1-16	1	120S	230E	4304732679	11889	Federal	GW	P	HANGING ROCK
HANGING ROCK FEDERAL I 12-4	12	120S	230E	4304732748	11889	Federal	GW	P	HANGING ROCK
HANGING ROCK FEDERAL F 7-6	7	120S	240E	4304732751	11889	Federal	GW	P	HANGING ROCK
TOBY FEDERAL F 6-15	6	1208	240E	4304732757	12037	Federal	GW	P	
HANGING ROCK FEDERAL I 1-14	I	120S	230E	4304732871	11889	Federal	GW	P	HANGING ROCK
TUCKER FEDERAL F 8-4	8	120S	240E	4304732872	12125	Federal	GW	P	
HANGING ROCK I 11-8	11	120S	230E	4304732935	12306	Federal	GW	P	HANGING ROCK
HANGING ROCK F 7-10	7	120S	240E	4304733100	12400	Federal	GW	P	HANGING ROCK
HANGING ROCK FED 11-9	11	120S	230E	4304734730	14017	Federal	GW	P	*
HANGING ROCK 1-8	1	120S	230E	4304736042	15514	Federal	GW	P	
TUCKER FED 8-6	8	120S	240E	4304736837	15513	Federal	GW	P	,
CENTER FORK F 17-4	17	120S	240E	4304732750	12038	Federal	GW	S	
ROSEWOOD FED 28-8	28	1108	220E	4304732840	12442	Federal	GW	S	•
HANGING ROCK FED I 1-4	1	120S	230E	4304732855	12389	Federal	GW	S	
HANGING ROCK FED F 7-8	7	120S	240E	4304732937	12305	Federal	GW	S	HANGING ROCK
TUCKER FEDERAL F 8-2	8	120S	240E	4304732993	12386	Federal	GW	S	
TUCKER FED 8-12	8	1208	240E	4304734729	13740	Federal	GW	S	
HANGING ROCK FED 7-2	7	1208	240E	4304735084	14019	Federal	GW	S	HANGING ROCK
TUCKER FED 8-10	8	120S	240E	4304739187	16399	Federal	GW	S	
HANGING ROCK FED 1-2	1	120S	230E	4304739430	16400	Federal	GW	S	

AUG 1 4 2014

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OU. GAS AND MINING

FORM 9

l	DIVISION OF OIL, GAS AND MI	DTV. OF O	L, GAS & MINING	5. LEASE DESIGNATION AND SERIAL NUMBER
SUNDRY	NOTICES AND REPORTS	S ON WEL	LS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill ne drill horizontal la	ew wells, significantly deepen existing wells below cur terals. Use APPLICATION FOR PERMIT TO DRILL f	rrent bottom-hole dept form for such proposal	h, reenter plugged wells, or to	7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL OIL WELL	8. WELL NAME and NUMBER:			
2. NAME OF OPERATOR:	GAS WELL OTHER_			Attached  9. API NUMBER:
McElvain Energy, Inc.	N3795			
3. ADDRESS OF OPERATOR: 1050 17th St, Suite 2500	Denver STATE CO ZIP	,80265	PHONE NUMBER:	10. FIELD AND POOL, OR WILDCAT:
4. LOCATION OF WELL	SIAIC ZIE			
FOOTAGES AT SURFACE:				COUNTY:
QTR/QTR, SECTION, TOWNSHIP, RANG	GE, MERIDIAN:			STATE: UTAH
11. CHECK APPR	ROPRIATE BOXES TO INDICAT	TE NATURE (	OF NOTICE, REPO	ORT, OR OTHER DATA
TYPE OF SUBMISSION		TY	PE OF ACTION	
NOTICE OF INTENT	ACIDIZE	DEEPEN		REPERFORATE CURRENT FORMATIO
(Submit in Duplicate)	ALTER CASING	FRACTURE	TREAT	SIDETRACK TO REPAIR WELL
Approximate date work will start:	CASING REPAIR	NEW CONS	TRUCTION	TEMPORARILY ABANDON
	CHANGE TO PREVIOUS PLANS	OPERATOR	CHANGE	TUBING REPAIR
	CHANGE TUBING	PLUG AND A	ABANDON	VENT OR FLARE
SUBSEQUENT REPORT	CHANGE WELL NAME	PLUG BACK		WATER DISPOSAL
(Submit Original Form Only)	CHANGE WELL STATUS	PRODUCTIO	ON (START/RESUME)	WATER SHUT-OFF
Date of work completion:	COMMINGLE PRODUCING FORMATIONS	RECLAMATI	ON OF WELL SITE	OTHER:
	CONVERT WELL TYPE	RECOMPLE	TE - DIFFERENT FORMATION	1
12 DESCRIBE PROPOSED OR CO	MPLETED OPERATIONS. Clearly show all p	nertinent details inc	duding dates denths volum	mes etc
	rent operator of the attached well			
Onshore Royalties, LLC				
P.O. Box 2326				
Victoria, TX 77902				
N4140				
Utah Operator # N4140	·			
Effective 8/1/2014				
		*	6	
McElvain Energy, Inc.		<u>Ons</u>	shore Royalties, LL	C.
Ant She	to		16-	
Ctover W. Chafte	/	8.4:	ahaal Ilaha	•
Steven W. Shefte Vice President -COO			chael Hahn perations Manager	•
vioo viooidoni ooo	•	Ď	SIM Box	1: LITRAKALILII
Daharat D	laall		For Took Ma	
NAME (PLEASE PRINT) Deborah P	owell	TITLI	Eng Tech Mana	ger
SIGNATURE Well K	: O andy	DATE	8/13/2014	
(This space for State use only)	,		<i>2</i> 7.	

APPROVED

SEP 1 5 2014

# State of Utah Department of Natural Resources Division of Oil, Gas & Mining

**Change of Operator** 

From McElvain Energy, LLC (N3795) To: Onshore Royalties, LLC (N4140)

Well Name	API	Legal	Status	Well Type	Utah ID	BLM ID	
			_				
Center Fork F 17-4	43-047-32750	T12S R24E Sec 17 NWNW	S	GW	12038		
Hanging Rock Fed 11-9	43-047-34730	T12S R23E Sec 11 NESE	Р	GW	14017	UTU57455	
Hanging Rock Fed 1-2	43-047-39430	T12S R23E Sec 1 NWNE	S	GW	16400	UTU57455	
Hanging Rock Fed 1-8	43-047-36042	T12S R23E Sec 1 SENE	Р	GW	15514	UTU57455	
Hanging Rock Fed 7-2	43-047-35084	T12S R24E Sec 7 NWNE	S	GW	14019	UTU73518B	
Hanging Rock Fed   1-14	43-047-32871	T12S R23E Sec 1 SESW	P	GW	11889	UTU73518B	
Hanging Rock Fed 24-13	43-047-32603	T11S R23E Sec 24 SWSW	Р	GW	11723	UTU73518A	
Hanging Rock Fed 7-6	43-047-32751	T12S R24E Sec 7 SENW	Р	GW	11889	UTU73518B	
Hanging Rock Fed 7-8	43-047-32937	T12S R24E Sec 7 SENE	S	GW	12305	UTU73518B	
Hanging Rock Fed F 7-10	43-047-33100	T12S R24E Sec 7 NWSE	Р	GW	12400	UTU73518B	
Hanging Rock Fed I 1-16	43-047-32679	T12S R23E Sec 1 SESE	Р	GW	11889	UTU73518B	
Hanging Rock Fed I 11-8	43-047-32935	T12S R23E Sec 11 SENE	Р	GW	12306	UTU73518B	
Hanging Rock Fed I 1-4	43-047-32855	T12S R23E Sec 1 NWNW	S	GW	12389	UTU57455	
Hanging Rock Fed I-12-4	43-047-32748	T12S R23E Sec 12 NWNW	P	GW	11889	UTU73518B	
Rosewood Fed 28-8	43-047-32840	T11S R22E Sec 28 SENE	S	GW	12442	UTU65355	
Toby Federal F 6-15	43-047-32757	T12S R24E Sec 6 SWSE	P	GW	12037	UTU08424A	
Tucker Fed 8-10	43-047-39187	T12S R24E Sec 8 NWSE	S	GW	16399	UTU70239	
Tucker Fed 8-12	43-047-34729	T12S R24E Sec 8 NWSW	S	GW	13740	UTU70239	
Tucker Fed 8-6	43-047-36837	T12S R24E Sec 8 SENW	P	GW	15513	UTU70239	
Tucker Fed F 8-2	43-047-32993	T12S R24E Sec 8 NWNE	P	GW	12386	UTU70239	
Tucker Fed F 8-4	43-047-32872	T12S R24E Sec 8 NWNW	Р	GW	12125	UTU70239	